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The Impact of Meritocracy Norm on Medical Decisions Toward a Low Status Group

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Tese especialmente elaborada para a obtenção do grau de doutor no ramo de Psicologia, especialidade de Psicologia Social

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Abstract

This dissertation investigates whether (a) social status predicts prioritization in medical decisions and (b) whether the salience of meritocracy explains the effect of patient' social status on those decisions. When deciding about prioritizing patients for a treatment or a medical procedure, providers rely on medical evidence and on the symptoms expressed by patients (Dovidio & Fiske, 2012). However, research shows a systematic disproportionate negative impact of medical decisions on members of low-status groups, such as racialized immigrant groups (Hicken et al., 2018; Smedley, et al., 2003). In previous research, implicit prejudice, stereotyping, and conservative ideologies were found to explain, at least under certain circumstances, status-based differentials in medical outcomes (Green et al., 2007). In the present thesis, we offer a novel and complementary perspective: the influence of social norms. In particular, we examine whether the Meritocracy norm explains differences in the prioritization, as a function of patient' social status. We do so by investigating the impact of Meritocracy on socially critical decisions in the medical context and involving a low status group, the African immigrants. We propose medical decisions to be less favorable toward the low status group, particularly when the meritocracy norm is salient; thus, meritocracy norm is conceptualized as a moderator of the relationship between social status and medical decisions. We also propose that the adverse effect of meritocracy should operate when it is possible to infer a person's personal responsibility for the state of health and when the *legitimizing* meaning of meritocracy is salient. Particularly, we propose that in a situation involving medical decisions, such as transplants or expensive medical treatments, meritocracy operates through its *legitimizing* meaning, which may reduce the preference for members of socially disadvantaged groups. We present empirical evidence that provides general support for the hypotheses in seven studies and a systematic review analyzing, in medical settings, how the intergroup biases of the Portuguese towards the low status group portrayed are reinforced and legitimized in the presence of meritocracy, a social norm that regulates social relations.

Keywords: social status; meritocracy; decision-making; social norms; low status groups

PsycINFO Code:

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Resumo

Esta dissertação investiga se (a) o estatuto social influencia a priorização do paciente em decisões de transplante ou tratamentos médicos com elevados custos e se (b) a saliência da norma da meritocracia explica o efeito do estatuto social nessas decisões. Ao decidir sobre a prioridade a atribuir a pacientes para um tratamento ou procedimento médico, os profissionais de saúde baseiam-se em evidência médica e nos sintomas expressos pelo paciente (Dovidio & Fiske, 2012). No entanto, evidência científica tem mostrado que as decisões médicas ter um impacto desproporcional em indivíduos, pertencentes a grupos de baixo estatuto, como é o caso de grupos de imigrantes racializados (Hicken et al., 2018; Smedley, et al., 2003). Em investigações anteriores, verificou-se que o preconceito implícito, os estereótipos e as ideologias conservadoras explicam, pelo menos em certa medida, a existência de uma decisão médica desigual, em função do estatuto social do paciente (Green et al., 2007). Nesta dissertação oferecemos uma perspetiva inovadora e complementar: a influência das normas sociais. Em particular, examinamos se a norma da Meritocracia explica as diferenças na prioridade atribuída, em função do estatuto social dos pacientes. Fazemo-lo investigando o impacto da Meritocracia nas decisões socialmente críticas, em contexto médico e envolvendo um grupo de baixo estatuto, os imigrantes africanos. Assim, propomos que as decisões médicas sejam menos favoráveis ao grupo de baixo estatuto, particularmente quando a norma da meritocracia está saliente; assim, a norma da meritocracia é proposta como moderadora da relação entre o estatuto social e a decisão médica. Propomos também que o efeito adverso da meritocracia opere quando é possível inferir a responsabilidade pessoal da pessoa pelo estado de saúde e quando o significado legitimador da meritocracia é saliente. Em particular, propomos que numa situação que envolve decisões médicas, como transplantes ou tratamentos médicos dispendiosos, a meritocracia opera através de seu significado legitimador de desigualdades, reduzindo a preferência por membros de grupos socialmente desfavorecidos. Apresentamos evidências empíricas que dão suporte geral às hipóteses em sete estudos e uma revisão sistemática, analisando, em contexto médico, de que forma o enviesamento intergrupal dos portugueses face ao grupo de baixo estatuto apresentado é reforçado, particularmente na presença da meritocracia, enquanto norma social que regula as relações sociais.

Palavras-chave: estatuto social; meritocracia; tomada de decisão; normas sociais; grupos de baixo estatuto

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Resumo Alargado

As decisões socialmente críticas constituem uma forma de comportamento social com um profundo impacto na vida das pessoas, particularmente num contexto em que os recursos existentes são escassos ou limitados e, por essa razão, podem implicar dano significativo ou alocação desigual de recursos materiais ou simbólicos (Costa-Lopes, Madeira, Moreira, & Miranda, 2018). No contexto médico incluem, mas não se limitam a julgamentos clínicos, avaliações ou decisões, e alocação de recursos médicos, como por exemplo transplantes de órgãos ou tratamentos altamente dispendiosos. Ao decidir sobre a prioridade ou recomendação para um tratamento ou procedimento médico complexo, os profissionais de saúde baseiam-se em evidência médica, orientações clínicas e no quadro sintomatológico do paciente. No entanto, um fator largamente independente, e que parece ter impacto direto e indireto nos resultados médicos é o estatuto social do paciente (Smedley, et al., 2003). Na verdade, as decisões médicas parecem ter um impacto desproporcional em indivíduos, membros de grupos de baixo estatuto, como por exemplo, grupos de imigrantes racializados (Hicken et al., 2018). Em investigações anteriores, verificou-se que o preconceito implícito, os estereótipos e as ideologias conservadoras explicam, pelo menos em certa medida, a existência de uma decisão médica desigual, em função do estatuto social do paciente (Green et al., 2007). Nesta dissertação oferecemos uma perspetiva inovadora e complementar: a influência das normas sociais. Em particular, examinamos se a norma da Meritocracia explica as diferenças na prioridade atribuída, em função do estatuto social dos pacientes. Fazemo-lo investigando o impacto da Meritocracia nas decisões socialmente críticas, em contexto médico e envolvendo grupos de baixo estatuto, como é o caso dos imigrantes africanos.

O objectivo geral desta dissertação é investigar se (a) o estatuto social influencia a priorização do paciente e se (b) a saliência da norma da meritocracia explica o efeito do estatuto social em decisões de transplante ou tratamentos médicos com elevados custos. De acordo com investigação anterior, espera-se que o estatuto social impacte na decisão médica, na medida em que o paciente de baixo estatuto terá uma maior probabilidade em receber um resultado menos favorável; esperamos que o efeito anterior seja qualificado pela ativação da norma da meritocracia, na medida em que este efeito será mais negativo para o baixo estatuto, quando a norma da

meritocracia estiver saliente. Para testar as associações hipotetizadas entre as variáveis, foram realizados sete estudos empíricos e uma revisão sistemática. De forma geral, os resultados desta tese sugerem que os pacientes de baixo estatuto são desproporcionalmente afetados, relativamente aos pacientes de alto estatuto. Nos estudos com leigos os resultados mostram que as decisões são mais desfavoráveis para o paciente de baixo estatuto (representado como, imigrante africano) quando a informação clínica apresentada inclui outros fatores não-raciais, permitindo uma decisão diferencial (estudo 1); esta decisão diferencial entre alto e baixo estatuto ocorre com maior frequência em indivíduos altamente meritocráticos (estudo 2). O impacto da meritocracia em decisões médicas complexas, envolvendo pacientes de alto e baixo estatuto, é maior quando os pacientes são percecionados com maior responsabilidade sobre a sua situação de doença. Ao decidir sobre a prioridade para um procedimento médico complexo, os participantes mostraram maior distinção entre pacientes, percecionados com maior responsabilidade pessoal sobre o seu estado de saúde, particularmente quando a norma meritocrática estava saliente. Quando a norma meritocrática estava saliente, a decisão foi mais favorável para o paciente de baixo estatuto, quando os participantes tinham tempo ilimitado para tomar a decisão (processamento deliberado; estudo 2), contudo, a decisão foi mais desfavorável para o paciente de baixo estatuto (*vs*. alto estatuto) na condição onde os participantes dispunham de tempo limitado para tomar a decisão (processamento heurístico; estudo 3). Este padrão revelou que os participantes primados com a meritocracia regulam a sua reação face ao paciente de baixo estatuto, em função da presença (vs. ausência) de mecanismos de controlo da expressão de preconceito. Em específico, os participantes primados com meritocracia que dispuseram de tempo ilimitado para tomar a decisão, apresentaram uma maior motivação para controlar o preconceito, que por sua vez, atenuou o desfavorecimento do paciente de baixo estatuto (estudo 4). Em seguida, foi realizada uma revisão sistemática com o intuito de analisar (a) o conteúdo das manipulações de meritocracia existentes na literatura e (b) se a meritocracia impacta sistematicamente de forma menos favorável face a grupos de baixo estatuto. Os resultados de 32 estudos revelaram que, apesar das diferenças existentes nas dimensões manipuladas, a saliência da Meritocracia facilita avaliações negativas e estereótipos, afetando negativamente decisões que envolvem membros de grupos de baixo estatuto, particularmente em contextos organizacionais. Nos dois estudos com estudantes de medicina, todos os participantes dispuseram de tempo limitado para decidir sobre o tratamento médico, contudo ocorreu um efeito de compensação do paciente de baixo estatuto, provavelmente devido

à norma anti discriminatória prevalecente, que impede que indivíduos de baixo estatuto sejam explicitamente discriminados. De realçar, este efeito de compensação é reduzido numa situação em que a ativação de estereótipos é racialmente congruente com o paciente de baixo estatuto, e de forma importante, quando os participantes são induzidos a pensar sobre o significado legitimador da meritocracia. É provável que numa situação envolvendo a alocação de recursos críticos, como transplantes ou tratamentos médicos de elevado custo, a meritocracia opere através de seu significado legitimador de desigualdades, o que pode reduzir a preferência por membros de grupos socialmente desfavorecidos. Com a presente tese, contribuímos para o conhecimento científico sobre as implicações dos enviesamentos intergrupais em contexto médico para grupos de baixo estatuto, e ainda contribuirmos, de forma geral, para o debate teórico em torno do papel da meritocracia na manutenção das desigualdades em saúde.

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Chapter I

Introduction

Who shall live when not everyone can live? Although this question has produced fruitful essays, experiments, and discussion across a number of disciplines, from philosophy to bioethics, and from medicine to psychology, one premise remains constant throughout the times, socially critical decisions as these may imply unequal distribution of resources or even serious harm to those in need. In the medical context, these socially critical decisions include but are not confined to clinical judgments, evaluations or decisions, and allocation of medical resources, as for example organ transplants or highly expensive treatments.

This doctoral research is not concerned with the *how* people allocate medical resources. A wide array of studies in the literature have dealt with the distributive principles that underlie the decision making processes in general (e.g. Deutsch, 1985) and in medical contexts specifically (Basson, 1979; Evans, 1983; Fortes & Zoboli; Nagarajan, 1980; Redelmeier & Tversky, 1990/1992; Selvaraj et al., 2017; Ubel et al, 2001). Rather, this doctoral research examines (a) *to whom* the distribution of medical resources negatively affects, producing health inequalities; and (b) *what socio-psychological processes* may be at stake, maintaining and legitimating those inequalities.

Research consistently show that the distribution of medical goods has been disproportionally impacting low status group members (Burgess et al., 2008;, 2012, Major, Mendes, & Dovidio, 2013; Major, Dovidio, & Link, 2018; Penner et al., 2013; Smedley et al., 2003; Sabin & Greenwald; van Ryn, et al., 2011; WHO, 2010). This thesis is developed and tested by examining the impact of priming meritocracy on critical medical decisions toward low status groups (e.g. African immigrants), using (mostly) an experimental research paradigm. In the current thesis, Meritocracy is broadly defined as a social norm according to which social status and rewards depend on individual effort and hard work (Kluegel & Smith, 1986). Additionally, this work focuses on Black immigrants, and more specifically, on African immigrants for many reasons: (a) they constituted for a long period the major foreign group in Portugal, with Cape-Verdeans being the largest group of African immigrants; (b) African immigrants are frequently targeted with everyday discrimination in Portugal (Santos, Oliveira, Rosario, Kumar & Brigadeiro, 2005; Vala , Brito, & Lopes, 1999/2015); (c) they are an ethnic and racial group with a lower social status in the country, and (d) they often receive lower levels of quality in the medical care (Dias, Severo, & Barros, 2008).

The present thesis started by exploring whether social status predicted differences in medical decisions scenarios with Portuguese laypersons. Following that, we tested whether and under what circumstances priming meritocracy predicts a less favorable decision toward lower status targets. In a subsequent phase, we carried out a systematic review, summarizing the content of the different priming tasks and analyzing to what extent the existing research on meritocracy activation do predict less favorable outcomes toward lower status groups. Next, we extended the research to the medical context, analyzing the role of endorsing meritocratic beliefs and latter, testing whether priming meritocracy predicts status-based differentials in medical decisions, among Portuguese medical students. We concluded the thesis investigating whether being an immigrant and black increases the likelihood of biases in medical decisions with Portuguese laypersons compared to all other cross categorizations (being an immigrant and white; being national and black; being national and white).

This thesis describes the main results of the doctoral dissertation and is outlined as follows. In the coming chapter, I will briefly guide you through a general framework on Migration and Health inequalities, narrowing to a particular form of inequality in health, the case of intergroup bias, and describe how intergroup bias is operationalized in the realm of critical medical decisions. Following that, I will summarize national and international research on intergroup bias in the medical context, and then describe psychological processes explaining social status impact on critical medical decisions. I will present at the end of the chapter the general purpose of this research, its specific goals and an overview of the theoretical model. In the chapters after that, I describe the studies undertaken to address the subsequent research questions, and the last part is reserved for the discussion and conclusion of this work.

1.1 Immigration and Intergroup Relations

Social responses to members of different groups in general and in medical contexts more specifically are shaped by historical and contemporary intergroup relations. These social relations, in turn, can have significant social consequences, for members of different groups, as the case of African immigrants.

Historically, Portugal has traditionally been a country of emigration (Baganha, 1997). However, in the mid-1960s the first wave of immigrants from the former colonies began to arrive. The following one immediately precedes the independence of these countries, many of which were Portuguese citizens. In the following years, immigration from former colonies, especially from Cape Verde, significantly increased.

This migratory movement generated new intergroup dynamics between the Portuguese, a relatively homogeneous population and the newcomers. Such migratory process would change the Portuguese racial landscape, particularly in the metropolitan area of Lisbon (e.g. Malheiros & Vala, 2004). Seeking a living and working conditions in the new country better than in their homeland, individuals coming from these African countries settled, and soon settlement took on a more permanent character (Peixoto, 2009). The effects of immigration in Portugal emerge in the later stages of the migratory process when these individuals settle permanently and became categorized as «the other», racially different. Thus, the social construction of an African immigrant subject is, among other historical and sociological factors, an outcome of this migratory process (Castles & Miller, 2009). Consequently, this socially constructed difference would delimit the position of the «different» subject in the hierarchical structure of the Portuguese society. As such, «the other», the African immigrant would be assigned to a subordinate position in the Portuguese society (Vala, Brito, & Lopes, 1999/2015). Thus, the association between the construction of difference and social hierarchy forms what is called prejudice (e.g., Park & Judd, 2005). Both processes are supported by dominance relationships: historical, political, social and economic dominance (e.g., Sidanius, Levin, Federico, & Pratto, 2001). It is the combination of prejudice and the existence of asymmetrical power relations between the Portuguese and the «the other», subordinated and categorized as immigrant and black that forms racism (Vala & Pereira, 2012).

Racism is commonly expressed as negative impressions, feelings, attitudes and beliefs about racialized groups, and importantly, in the emergence of episodes of discrimination. We can

find episodes of everyday discrimination. In health, it involves preventing a targeted person from having access to universal health care or providing inferior health care, relative to the Portuguese natives. It may also mean allocating medical resources unequally, such as high-cost life-saving medical treatments (*see* Major, Dovidio, & Link, 2018). Consequently, racism has been proposed as a fundamental cause of health inequalities (*see* Phelan & Link, 2015; Link, Phelan & Hatzenbuehler, 2018). Episodes of discrimination extend to other social groups, such as women, poor, elderly, homeless and even to other non-racialized immigrant groups. We focus on the combination of a binary categorization, being immigrant and black - a double outgroup – because they report frequently being the target of discrimination (Santos, Oliveira, Rosário, Kumar, & Brigadeiro, 2005).

The new intergroup dynamics generated by migratory movements seem to have created a general reaction that hardly fosters social inclusion, as the generic immigrant is depicted as a potential threat to the economic well-being and to the national identity (Vala, Pereira, Lopes, & Deschamps, 2010). And, more importantly, in the contemporary interracial dynamics, generated from migratory movements, the phenomenon of racism is evolving (Vala & Pereira, 2012).

Therefore, we merge racism in the broader context of Immigration and Health Inequalities, enhancing the scientific debate, which we believe to be important in the context of Migration. Thus, in general, this thesis addresses migration and racism in critical medical decisions, taking into account how native Portuguese racial preferences affect one of the most fundamental people's rights –health entitlement. In particular, we examine how Portuguese laypersons and medical students racial preferences affect medical decisions involving low status individuals targeted as African immigrants. We also propose to examine whether social norms that regulate social life (e.g. Billig, 1982; Reicher, 1996), specifically how meritocracy orients Portuguese racial preferences, in situations of allocation of medical resources involving Portuguese and African immigrants.

1.2 Immigration, Health, and Intergroup Relations

Adequate provision of services and access to health care resources are key elements for the integration of migrants and members of minority ethnic groups (Fernandes, & Miguel, 2009;

Rechel, Mladovsky, Ingleby, Mackenbach, & McKee, 2013). In Portugal, despite the development of successive health policies aimed at promoting better integration of immigrants and minority groups, these have not been entirely successful. Results from the Migrant Integration Policy Index (2015) show health policies unfavorably affecting migrants' integration, particularly, their right to healthcare.

One of the consequences of unequal access to health services between migrants and native Portuguese is inequality in health status. Health inequality concerns differences in the quality of care among different social groups and "*it is a difference in which disadvantaged social groups – such as the poor, racial and ethnic minorities, women or other social groups who have persistently experienced social disadvantage or discrimination – systematically experience worse health or greater risks than more advantaged social groups*" (Braveman, 2006, p.167).

In Portugal, despite the increasing effort, there is a lack of systematic monitoring of the health inequalities associated with migrants, which limits knowledge about the current state of this social problem. Nonetheless, the existing research points to a pattern of inequality regarding the use of health services among migrant groups and Portuguese natives, suggesting that this inequality negatively affects immigrants, as they report more restrictions on access and more infrequent use of health services (Dias et al., 2018; Oliveira, & Gomes, 2018; Fonseca et al., 2009; Padilla et al., 2013; Shaaban, Morais, & Peleteiro, 2019). For example, in recent study immigrants reported fewer medical visits, but higher consumption of medication without a prescription, relative to the native Portuguese. Another difference found between immigrants and Portuguese was the identification of financial difficulties as a barrier to health services access; specifically, immigrants reported more often that they had postponed a medical appointment or treatment due to financial difficulties (Shaaban, Morais, & Peleteiro, 2019)

Some researchers have investigated barriers that limit immigrants' access to health care, especially barriers at the organizational level of health services. Research has identified the existence of structural and functional barriers to health services, namely the complexity of administrative and bureaucratic procedures (Dias et al., 2008). One of the factors identified is related to administrative barriers that immigrants encounter, such as discretionary judgments and/or documentation that is difficult for migrants to obtain. For example, administrative decisions regarding the provision of care were found to be highly biased, with health workers being reported to make judgments about migrants' health care coverage on the basis of discretionary judgments

about required documentation to healthcare provision (e.g. proof of low income on the basis of tax returns; identity documents available only from the police; proof of address from local authority records). Additionally, undocumented migrants and asylum-seekers in Portugal generally have weaker healthcare entitlements compared to legal migrants, with some studies reporting situations of refusal to care for undocumented immigrants despite the fact that the current legal framework establishes that all individuals can access health services (Dias et al., 2018; Padilla et al., 2013).

In addition to the aforementioned organizational factors influencing the effective use of health services by immigrants, data on the health status of immigrants indicate important differences between the health status of immigrants and the health status of the Portuguese. For example, compared to Portuguese natives immigrants have a higher prevalence of deaths associated with unnatural causes among immigrants (Oliveira & Gomes, 2018); African migrants, in particular, have higher mortality for all causes, circulatory disease, coronary heart disease and stroke, and higher mortality for infectious diseases including AIDS (Harding, Teyhan, Rosato, & Santana, 2008; Williamson, Rosato, Teyhan, Santana, & Harding, 2009). Furthermore, compared to the Portuguese, immigrants are more exposed to risk factors, such as tobacco and alcohol consumption and unhealthy eating habits (Oliveira & Gomes, 2018).

Beyond the structural, societal and individual determinants of health inequalities linked to healthcare access, another aspect of health inequalities associated with migration concern quality of the care provided (Smedley, Stith & Nelson, 2003). Overall, and going beyond the Portuguese context, immigrant minorities are more likely to receive lower quality levels of healthcare compared to the general population (Giannoni, Franzini, & Masiero, 2016; Ingleby, Chiarenza, Devillé, & Kotsioni, 2012; Ingleby, Krasnik, Lorant, & Razum, 2012; World Health Organization, 2010).

The provision of lower quality levels of healthcare to immigrant minorities can be, at least to some extension, a result of an interpersonal dynamic involving feelings, evaluations, attitudes, and beliefs both from the patient and the provider. For example, several studies have shown that healthcare professional's encounters with patients affect the quality of healthcare received, especially when patients are members of racial minority groups (Street, Gordon, & Haidet, 2007; Penner, Blair, Albrecht, & Dovidio, 2014; Penner et al., 2016). These patient-doctor racially

discordant interactions, in turn, have significant implications not only for the physician's own behavior towards the patient, but also for the way the patient reacts to the interaction with the physician (Penner, Dovidio, Manning, Albrecht, & van Ryn, 2018) . For example, there is evidence that physicians with more negative attitudes toward black patients are more likely to verbally dominate the interaction and less likely to involve the patient in their treatment (Hagiwara et al., 2013; Penner et al., 2016). Other studies show that health care providers with more negative attitudes are less positive when they communicate with their black patient (Penner, Blair, Albrecht, & Dovidio, 2014). But patient's behaviors and perceptions during a clinical interaction are important as well. For example, researchers have emphasized that patients mistrust is negatively associated with the provider's perceptions. As an example, Penner and colleagues (2010) found that providers had less positive treatment expectations for patients with a greater mistrust, and this relationship was mediated by physicians' less favorable perceptions of patients, in that greater patient mistrust was associated with physicians' less favorable perceptions, which in turn led to less positive treatment expectations.

On the patients' side, several studies show that the health provider's feelings affect the patient's satisfaction and trust in the doctor. For example, researchers found that patients who interact with health providers with higher negative feelings toward Blacks are less satisfied with the interaction, report less trust and experience less positive affect (Blair, et al, 2013; Hagiwara, et al., 2013; Penner et al., 2013).

In Portugal, the work that describes immigrants' satisfaction with health care and services shows that, in general, migrant groups perceive an unequal treatment when compared to the Portuguese population (Dias, Milton & Barros,2008; Dias & Gonçalves, 2007; Dias et al., 2018; Leandro, Araújo, & Costa, 2002). In a study conducted with African, Brazilian and Eastern immigrant groups, with the aim of identifying the factors that affect the use and satisfaction with health services, Dias and colleagues (2018) describe a greater difficulty experienced by immigrants when interacting with the provider. Particularly, African immigrants reported that many health professionals use complex words, or do not try to understand what immigrants say and, importantly, discriminate against immigrant patients. Regarding the quality of health services provided, immigrants agree that health services are good; yet, the quality provided to immigrant patients is perceived as lower than the one provided to native Portuguese (Dias et al., 2018).

Health care inequalities are complex and likely to be a product of multiple influencing factors: structural factors, patient attributes, provider's attitudes and beliefs, all potentially influence the quality of care among different social groups. This dissertation explores a complementary form of health inequalities associated with immigrant groups. In the current thesis, we approach the role of intergroup bias on medical decisions involving both African immigrants and Portuguese (fictitious) patients.

Generally, intergroup bias is defined as a "systematic tendency to evaluate one's own membership group (the in-group) or its members more favorably than a non-membership group (the out-group) or its members" (Hewstone, Rubin, & Willis, 2002, p.576). These intergroup bias may assume many forms and occur at different levels of analysis. Explicit bias is a particular tendency, inclination, feeling or opinion especially one that is preconceived or unreasonable, as for example racism or sexism. Bias can also be implicit or unconscious. This form of bias concerns ingrained habits of thought that lead to errors in how people perceive, evaluate and make decisions. Intergroup bias can occur at a cognitive level, assuming the form of stereotyping; at an attitudinal level, in the form of prejudice, or at the behavioral level, leading to discrimination; and is typically an expression of in-group favoritism or out-group derogation (Mackie & Smith, 1998; Wilder & Simon, 2001). In the current thesis, we explore explicit expressions of intergroup bias, mostly at the attitudinal and behavioral level.

In healthcare settings, as in any other real-world setting, healthcare providers are just as susceptible to bias as any other layperson (FitzGerald & Hurst, 2017). In the medical context, bias concerns the way the providers proceed, reason, remember certain things and make decisions. Provider bias can be expressed in terms of prejudice and stereotypes, either through the beliefs and opinions, one holds about other groups, but also at the behavioral level during an interaction with a patient (Dovidio, Kawakami & Gartner, 2002). For example, in medical settings, provider bias can be expressed through the number of words used to explain a particular medical procedure (Hagiwara, Slatcher, Eggly, & Penner, 2017), or time spent with the patient during the clinical encounter (Hagiwara et al., 2013; Silva, 2018) or through the recommendation and prioritization for treatments or chirurgical procedures (Green et al., 2007).

Research on provider bias shows that it can influence in an unfavorable way medical outcomes involving lower status groups, particularly ethnic-racial groups (Dehon, Weiss, Jones,

Faulconer, Hinton, & Sterling, 2017; FitzGerald, & Hurst, 2017; Green et al., 2007; Hall et al, 2015; Paradies, Truong, & Priest, 2014; Daugherty et al., 2017; Maina, Belton, Ginzberg, Singh, & Johnson, 2018) and thus contributes directly to inequalities in health care (IOM, 2003).

Thus, this thesis will particularly focus on the role of racial-ethnic biases in medical decisions involving both an African immigrant and a Portuguese patient. Moreover, because social norms are an important tool of how one views and navigates in the social system, and importantly, can powerfully shape how patients are perceived and differentiated based on their social status (McCoy & Major, 2007), we address whether meritocracy, as a social norm regulating most of the Western societies, promotes or attenuates racial-ethnic biases in medical decisions.

Next, we briefly introduce the definition of socially critical decisions, a significant theoretical concept in which the thesis is grounded, and describe how socially critical decisions have been disproportionally impacting low status group members across different decisional contexts.

1.3 Socially Critical Decisions in Intergroup Relations

Socially Critical Decisions (SCD) constitute a form of social behaviors with a deep impact on people's lives, particularly in a context where existing resources are scarce or limited, and for this reason, may imply serious harm or unequal allocation of material or symbolic resources (Costa-Lopes, Madeira, Moreira, & Miranda, 2018).

In the realm of relations between social groups holding different power and privileges the in society, this unequal division of scarce resources between social groups may create feelings of animosity toward out-groups, leading for example high status group members to derogate low status group members (Tajfel & Turner, 1979). Some researchers have argued that status relations between dominant and subordinate groups determine the strategies used by the former to preserve the status quo and access to whatever resources (Fischer & Smith, 2003; Haney & Hurtado, 1994). By social status, we mean a ranking of hierarchy, where a group's relative position is perceived on some evaluative dimension of comparison (Tajfel & Turner, 1979). For example, where low status groups often are perceived as inferior and stereotypically perceived as being low in competence or

warmth (Fiske et al. 2002). Some paradigmatic examples of low status groups are immigrants, poor and homeless.

1.3.1 Socially Critical Decisions toward Low Status Targets

A sufficient amount of research within asymmetric social relations has shown across different domains, that group status, such the one deriving from racial categories, is sufficient to trigger stereotypes or implicit negative attitudes, affecting socially critical decisions (e.g., Dovidio, Kawakami & Gaertner, 2002, Correll, Park, Judd, & Wittenbrink, 2002; Green et al, 2007; Cikara, Farnsworth, Harris, & Fiske, 2010). We briefly review three types of socially critical decisions where low status groups are disproportionally affected - police shootings, moral dilemmas and legal decisions.

A first example of socially critical decisions regards decisions taken within police shootings. During police shootings individuals need to make quick decisions, some of them end up being wrong, causing serious consequences, namely the shooting of unarmed individuals.

Faced with a series of fatal shootings in the US involving unarmed blacks, the researchers began to raise several questions, one of which was fundamental: would the police, in the same situation, have assumed that the suspect was armed if he was a Caucasian?

In order to answer this specific question, a team of researchers led by Joshua Correll initiated a set of experiments re-enacting the experience of deciding whether or not to shoot, when confronted with a potentially dangerous suspect. To this end, a simple computer game was developed simulating situations where targets would appear in various contexts, randomly either carrying a gun or a neutral object (e.g. a cell-phone or a wallet). And participants were asked to decide whether or not to shoot depending on whether the suspect was armed or not (Correll, Park, Judd, & Wittenbrink, 2002). The results were striking showing that participants spent less time deciding to shoot when the armed target was Black, and importantly were quicker to decide not to shoot at unarmed targets when they were White. Moreover, in a subsequent study, experimenters decided to shorten the time to make a decision (from 850 to 650 milliseconds). This was sufficient to unfavorably affect the Black target, as participants shot more frequently against the unarmed Black target (Correll et al., 2002). This pattern would be named shooter bias effect.

Despite the promising evidence of a shooter bias effect, one of the limitations was the ecological validity, as participants in the first studies were laypeople. Later on, they extended this paradigm to the police context. Again, the results showed that police officers spent more time making the right decision when confronted with an unarmed black man or an armed Caucasian (Correll, Park, Judd, Wittenbrink, Sadler, & Keesee, 2007).When the time to make the decision was shortened (from 850 to 650 milliseconds) Black suspects were not more affected than White targets (Correll et al., 2007), suggesting that police officers' training buffers the time bias, under time constrains. Overall, the findings are consistent with the hypothesis that the shooter bias effect is partially explained by the stereotypical associations made between the target and their race. People spend less time in making a decision that is consistent with the stereotypes of Blacks (e.g., Armed Black) and Whites (e.g. Unarmed White) and more time in making a decision that is inconsistent. So in line with this stereotypical associations, the correlations observed suggested that implicit prejudice and negative stereotypes are important to understand the propensity to disfavor decisions toward Black targets. In this regard, other studies found that people are quicker to distinguish weapons from tools when exposed to photographs of Black faces than when exposed to photographs of Caucasian faces (Payne, 2001) and direct their attention more to black faces than to Caucasian faces when primed with the concept of crime (Eberhardt, Goff, Purdie, & Davies, 2004).

A second example of socially critical decisions are ethical dilemmas. Ethical dilemmas include a set of moral dilemmas, where individuals, in the impossibility of saving everyone involved in the decision-making scenario, are forced to choose who they want to save. In this decision-making process, dilemma resolutions recruit people's moral principles of right and wrong. One such dilemma is the footbridge dilemma: someone is standing next to a large stranger on a footbridge that spans the tracks, in between the oncoming trolley and the five people. In this scenario, the only way to save the five people is to push this stranger off the bridge, onto the tracks below. He will die if the person does this, but his body will stop the trolley from reaching the others. Often the question is whether it is morally acceptable for the person to push the bystander off the overpass. Recently, researchers wonder whether, beyond people's moral judgments, stereotypes associated with certain social groups would be independently implicated in the moral acceptability of the person being sacrificed and the people being saved (Cikara, Farnsworth, Harris, & Fiske, 2010). If true, such differences in group-based moral acceptability would have critical implications in

socially relevant resolutions, as for example, whether to endorse welfare policies that help a few at the expense of the many, or whom should be prioritized for receiving medical resources that are directly related to the preservation of life (e.g. organ transplantation).

To examine whether certain social groups received a more unfavorable outcome in moral dilemmas, Cikara and colleagues (2010) carried out an experiment using an intergroup version of the footbridge dilemma, where participants reported whether it was acceptable for the person to push one person off an overpass to save five people, in 128 dilemmas that varied group members from the Stereotype Content Model (Fiske et al., 2002) quadrants in the positions of 'sacrificed' and 'saved' targets. The results showed differences in the acceptability of sacrificing the victim as a function of their group membership. In particular, it was more morally acceptable to sacrifice low status groups and least acceptable to save them. However, other experiments on moral dilemmas found mixed results concerning the acceptability of sacrificing a target from a low status group, as homeless and drug-addicts. For example, Moreira (2016) found relative differences in the decision to sacrifice a low-status victim (vs. a high-status victim) for the sake of saving five individuals, after controlling the emotion depicted by the stimuli, suggesting that was not more morally acceptable to sacrifice low status target, compared to the high status target. Interestingly, the results show that at least, one of the low status target was more morally acceptable to sacrifice, as the decision to sacrifice the drug addict for the sake of saving five individuals was more acceptable, particularly when Meritocracy beliefs were salient (vs. the control condition; we will discuss this in the later section). A third example of socially critical decisions includes legal decisions. In jury decision-making, the resolutions to be made may constitute a critical life event for the people involved in an allegedly illegal behavior, as it compromises their freedom for a period of time, and consequently affects other social and personal aspects of their lives (Gottfredson & Gottfredson, 1988). The decisions about the punishment to ascribe to an allegedly illegal behavior, comprehend various forms of appraisals: Should the event be considered as an offense? Should an arrest be made? Is the offender guilty? If so, what should be the sentence? Research suggests that sentencing decisions seem to be more unfavorable toward low status groups, particularly when certain moderators are present (for a meta-analytic review see, Mitchell, Haw, Pfeifer, & Meissner, 2005; Sunnafrank, & Fontes, 1983; Sweeney & Haney, 1992). Particularly, being Black (vs. White) increases the likelihood of a harsher verdict decision. Consistent with this, experimental evidence conducted in Portugal followed a similar pattern, showing that defendant's status had an effect on sentencing decisions

(Freitas, 2018). Particularly, a Black defendant (vs. . White) was targeted with a longer sentence, when the crime was stereotypically consistent, i.e., a Black-stereotyped crime.

Summarizing the above amount of research, the evidence seems to suggest that low status groups are disproportionally affected at least in these socially critical contexts - police shootings, moral dilemmas, and legal decisions. In addition, evidence suggest that implicit bias and negative stereotypes, particularly those stereotypically consistent with the target, are important to understand the propensity to disfavor decisions toward low status targets.

1.3.2 Socially Critical Decisions Low Status Targets in the Medical Context [1]

A type of socially critical decisions relevant to the present dissertation regards those that take place within the medical context. Medical decision-making is complex and rely on medical evidence and on the symptoms expressed by patients (Dovidio & Fiske, 2012). In the medical context, physicians are responsible for making daily clinical decisions about patients. Some of the resulting resolutions have a low impact on patients' lives, but others have a deeper impact on people, compromising the quality of life, or even the preservation of life[2].

The literature on the relation between the patient's social status and medical decisions has grown substantially, especially in the US, and has been mostly applied in relevant dimensions concerning the treatment of pain in adults (e.g., Burgess et al., 2008) and children (e.g., Sabin & Greenwald, 2012), cardiac procedures (e.g., Green et al., 2007; van Ryn, Burgess, Malat, & Griffin, 2006) hypertension treatment (Blair et al., 2014) and cancer treatments (e.g., Penner,

[1] A portion of this section appears in the chapter Costa-Lopes, R., Madeira, F., Moreira, W., & Miranda, M., (2018). Socially critical decisions towardstoward low status groups: the role of meritocracy. In *Changing Societies: Legacies and Challenges. Vol. I: Ambiguous Inclusions: Inside Out, Outside*. Publisher: Imprensa de Ciências Sociais

[2]About the latter, the decision comprehend various forms of appraisals and allocation principles (Deutsch, 1985): Should the decision follow an equity or *merit* principle? Or is more appropriated to reason in terms of the need for treating *equally* potential recipients? And importantly, are some individuals more deserving of resources than others? Research on the allocation of health resources has been fertile in the discussion about the use of distributive justice principles in the health context (Basson, 1979; Evans, 1983; Fortes & Zoboli; Nagarajan, 1980; Redelmeier & Tversky,(1990/1992); Selvaraj et al., 2017; Ubel et al, 2001; Skitka & Tetlock, 1992).

Eggly, Griggs, Underwood, Orom, & Albrecht, 2012). Other important studies have focused on inferences and reactions activated by the salience of the social status, with the potential to influence subsequent medical decision-making (e.g., Mathur, Richeson, Paice, Muzyka, & Chiao, 2014). Overall, findings show that patient's social status is directly or indirectly associated with medical decisions. For example, direct evidence of patient's status effect was found in Schulman and colleagues' study (1999) where it was found that physicians were less likely to refer Black women for cardiac catheterization, even after controlling for symptoms, physicians' estimates of the probability of coronary disease and clinical characteristics. In another study, van Ryn and collaborators (2006) found that recommendation for a coronary surgery was significantly influenced by patient's ethnicity, in that Black patients were significantly less recommended for coronary surgery in comparison with White and Hispanic patient. This difference was particularly strong among male physicians. In Europe, in Drewniak and colleague's study (2012) physicians read a fictitious scenario systematically varying the origin of the patient (e.g., Switzerland vs. Serbia vs. Ghana) and residence status (e.g., naturalized *vs.* residence permit *vs.* no residence permit), among other dimensions, and were then asked about the likelihood of treating (as quickly as possible) the patient depicted in the vignette. The results show that relative to a patient from Switzerland, immigrant patients were "selected" to be treated less quickly; and among immigrant groups, patients from Serbia were "selected" to be treated less quickly than patients from Ghana.

Furthermore, the salience of the target group status seems to indirectly affect individual's evaluations and judgments during socially critical decision-making. For example, in a study intended to examine medical students' willingness to prescribe antiretroviral pre-exposure prophylaxis (PrEP) to a White *vs.* Back patient, participants judged the Black patient to be more likely than the White patient to increase his rate of unprotected sex if prescribed PrEP, which, in turn, was associated with reduced willingness to prescribe PrEP to the Black patient (Calabrese et al., 2014). A similar indirect effect was not found for the white patient. This result is consistent with research on stereotypes activation in clinical judgement and decision making (Ryn, Burgess, Malat, & Griffin, 2006; Hirsh, Jensen & Robinson, 2010) suggesting that physicians often associate racial category with racial stereotypes and use it as decision making heuristics, including a very interesting line of research focusing on how implicit stereotyping may be used in diagnosis and treatment without conscious knowledge of this influence, or may even unduly influence

diagnosis and treatment (Bean, Focella, Covarrubias, Stone, Moskowitz, & Badger, 2014; Dovidio & Fiske, 2013; Moskowitz, Stone, & Childs, 2012).

More recently, studies showed how cognitive stressors (e.g. time pressure, cognitive load) may promote reliance on stereotypes during decision-making (Burgess et al, 2014; Stepanikova, 2012). For example, it was found that male physicians were using controlled processes to "correct" for racial stereotypes when they had the opportunity (e.g. sufficient cognitive resources) to do so, but were influenced by racial stereotypes in their decision making when under cognitive busyness (Burgess et al, 2014). In another study, where physicians read a vignette describing a patient with chest pain and gave their medical judgments, it was found that the likelihood of referral to a specialist was significantly lower for blacks than for Whites, when physicians were under high time pressure (Stepanikova, 2012).

1.3.2.1 Evidence from Portugal

In Portugal, despite its relevance, very little work has examined how the patient characteristics and provider bias can produce health inequalities. Consequently, empirical evidence on the impact of patient characteristics and provider bias on medical decisions is even scarcer, especially decisions involving racial minorities.

Despite the scarcity of empirical evidence[3], the existing research shows differences in the quality of care among immigrant groups, and particularly it shows how certain aspects of the quality of care, as for example, patient-provider interactions, produce physical and mental health inequalities. For example, in a recent study carried out with a large ethnic sample of immigrants living in Portugal researchers measured a range of variables, including socioeconomic status, integration in the labor market and importantly, perceptions of provider-patient interactions. The goal was to examine to what extent those factors were associated with immigrant's psychosocial

[3] Perelman, Mateus, and Fernandes, (2010) used a large data base of patients admitted with cardiac heart disease at Portuguese NHS hospitals over the 2000-2006 periods to show that women receive notably less catheterization and revascularization than man. This was the first and only study demonstrating bias in cardiac medical treatments, particularly gender bias.

distress. One of the important findings was related to patient-provider interactions, suggesting that provider's unwillingness to engage in a positive clinical interaction was strongly associated with higher psychological distress (Teixeira & Dias, 2018). Thus, although the provider's behavior may be expressed without awareness, these behaviors have a significant negative impact on immigrant's mental well-being.

Although Portuguese health care providers appear to be largely unprejudiced on explicit measures (Dias et al., 2018), research does show that provider bias is significantly associated with lower quality of care. For example, in a recent study examining how prejudiced attitudes, intergroup contact, and threat perception combine to affect the healthcare provision for immigrant patients, Madeira and colleagues (2018) found that prejudiced attitudes toward immigrants are associated with a higher perception of health threat. In addition, in providers with high levels of contact with immigrant patients, the perceived threat mediates the relationship between prejudiced attitudes and treatment bias. In contrast, for those healthcare providers who have low levels of contact, a perceived health threat was not associated with treatment bias.

With regard to whether provider bias affects medical outcomes for immigrant patients, more data obviously needed, as previously identified by the Health Regulatory Authority (2015). But as described earlier provider's biases are an important source to be considered since immigrants experience interpersonal barriers (a) when accessing healthcare services (Dias,Gama, Cargaleiro, & Martins, 2011; Dias, Gama, Cortes & Sousa, 2011; Fonseca, Ormond, & Malheiros, 2005), (b) during clinical interactions and (c) in the quality of care received.

In the following section, we present three frameworks for the explanation of intergroup bias in medical decision-making – (a) Prejudice (b) stereotypes and (c) ideologies.

1.4 Explanatory framework for health inequalities

Prejudice as an explanatory framework for Health Inequalities

Both in North America, Europe in general and Portugal in particular, racial prejudice is a pervasive social problem, but it has evolved in the last 50-60 years into different modalities, including more implicit forms of manifestation. In general terms, blatant forms of racial prejudice and stereotyping have substantially declined during this period and were being replaced by more

subtle forms of prejudice (see Crandall & Eshleman, 2003; Dovidio & Gaertner, 1998; Gaertner & Dovidio, 1986; Pettigrew & Mertens, 1995; Vala, Brito, & Lopes, 1999). Because the two forms of prejudice differ with regard to a person's awareness, these two types of prejudice are largely independent of one another (Dovidio, Kawakami, Smoak, & Gaertner, 2009).

Dovidio and Gaertner (2004; Gaertner & Dovidio, 1986) proposed that a subtle form of bias, *aversive racism*, can have a detrimental influence, particularly on interracial interactions. The Aversive Racism framework (Dovidio & Gaertner, 1998; Gaertner & Dovidio, 1986) has been one of the proposed theoretical explanations to comprehend racial bias in the medical context (Fiske & Dovidio, 2012; Major, Mendes, & Dovidio, 2013; Penner et al., 2013). Aversive racism is a specific type of contemporary bias held by people who (a) endorse egalitarian values and beliefs, (b) believe themselves to be unprejudiced, but (c) unconsciously hold negative beliefs about Blacks and other out-groups, and (d) subtly discriminate in ways that are ambiguous and indirect and that can be rationalized as something other than racial discrimination (Dovidio & Gaertner, 2000).

In the medical context, because the antiracism norm calls on aversive racist providers not to act in a biased way, highly aversive racist providers may be unintendedly more oriented to avoid racially discordant interactions (Dovidio et al., 2008; Penner et al., 2013) or as argued more recently, in the impossibility of avoiding a racially discordant interaction, when interacting with a low status patient (e.g., Black immigrant), aversive racist providers may have an orientation to engage in a legitimizing process, that will enable them to act in a biased way toward low status patients and yet dissociating their behavior from prejudice-motivated discrimination (Madeira, Pereira, Gama, & Dias, 2018; Pereira, Vala, & Leynes, 2010).

In general terms, aversive racist individuals hold low explicit and high implicit negative attitudes toward socially devalued groups. In the medical context, several studies show that providers hold biases expressing negative attitudes toward low status groups, such as Blacks (Blair et al., 2013; Cooper et al., 2012; Green et al., 2007; Hausmann et al., 2015; Oliver, Wells, Joy-Gaba, Hawkins, & Nosek, 2014; Sabin, Nosek, Greenwald, & Rivara, 2009; Schaa, Roter, Biesecker, Cooper, & Erby, 2015; Stepanikova, 2012) or Latinos (Blair et al., 2013; Stepanikova, 2012).

But to what degree provider bias affects health care and outcomes? Evidence from four systematic reviews found a significant positive relationship between implicit bias and lower

quality of care (Hall et al, 2015; Paradies, Truong, & Priest, 2014; FitzGerald, & Hurst, 2017; Dehon, Weiss, Jones, Faulconer, Hinton, & Sterling, 2017). The combination of findings from these systematic reviews shows that the quality of care is lower in specific aspects of patient care. Namely, it is particularly strong in patient-provider interactions and health outcomes, and weaker in clinical decisions (Hall, et al., 2015). Research has consistently found that provider bias affects their interactions with low status patients, particularly black patients (Blair et al., 2013; Hagiwara et al., 2013; Penner et al., 2010; Penner et al., 2016; Penner, Blair, Albrecht, & Dovidio, 2014). For example, Penner et al. (2010) examined implicit racial bias in relation to interpersonal behavior, showing that more biased providers were rated by their African-American patients as lower in warmth and friendliness. Moreover, a provider with higher implicit bias tends to be less patient-centered and interpersonal interactions tend to be shorter, especially with Black patients (Blair et al., 2013; Penner et al., 2016; Penner, Blair, Albrecht, & Dovidio, 2014).

Regarding clinical decisions evidence is mixed to whether provider bias affects clinical treatment decisions, with studies failing to find effects of prejudice on provider's treatment decisions (Haider et al., 2011, 2015a, 2015b; Hirsh, Hollingshead, Ashburn-nardo, & Kroenke, 2015). However, the evidence does show that bias influences, at least some type of clinical decisions, particularly bias at the implicit level (Green et al, 2007; Sabin & Greenwald, 2012). For example, Green and collaborators (2007) found that providers with greater implicit racial bias were less likely to recommend the appropriate treatment when presented with a clinical vignette portraying a patient with chest pain symptoms. In another study on treatment decisions, Sabin and Greenwald (2012) found that the higher the provider level of bias was, the less likely was to prescribe postsurgical pain medication for a low status patient (e.g. Black vs. White).

This theoretical perspective describes the role of prejudice, in particular, implicit prejudice, in explaining bias in medical decisions and how it can negatively affect interpersonal communication and medical decisions. Another line of research shows how stereotyping may have direct relevance in patient care, particularly in judgments and medical decisions.

Stereotypes as an explanatory framework for Health Inequalities

A team of researchers has taken a sociocognitive approach to bias in medical decision-making. Van Ryan and colleagues assert that beyond implicit racial biases, providers hold explicit

racial stereotypes that may be accessed when interpreting clinical symptoms, which in turn inform diagnosis and treatment referral (van Ryan & Fu, 2003; van Ryan et al., 2011). For example, Black patients were perceived as likely to be seen as at risk for substance abuse, and having inadequate social support. In addition, they are perceived as less intelligent and cooperative than White patients (Green et al., 2007; van Ryan & Fu, 2003). These stereotypes, in turn, influence provider's expectation about patient treatment adherence (van Ryan & Fu, 2003), meaning that Black patients are perceived as less likely to comply with the medical treatment, than White patients.

Consistent with these findings suggesting racial stereotypes as decision-making heuristics, a complementary line of research found an association between priming faces of low status targets and implicit stereotyping activation (Bean, Focella, Covarrubias, Stone, Moskowitz, & Badger, 2014; Moskowitz, Stone, & Childs, 2012). For example, Moskowitz and colleagues (2012) found that priming an African American face, led providers to react more quickly for stereotypical diseases, indicating an implicit association of certain diseases with African Americans, some with a known genetic component, but others without genetic association, for example, obesity or drug abuse. One potential argument to be made is that over time in their medical practice, doctors learn to associate the prevalence of certain diseases and conditions with specific social groups. As a result, the stereotypical inferences are less about the social group, and more about clinical evidence and disease prevalence, thus dissociating it from its racial-based stereotype. However, the argument concerning practice years does not apply, at least in certain situations. For example, in a sample of nursing and medical students, Bean and colleagues (2012) found that priming Hispanic faces cause greater activation of noncompliance and health risk stereotypes than non-Hispanic faces. Thus, implicit stereotyping seems to occur independently of a provider's medical experience and importantly, occur without conscious knowledge of this influence.

In general, these findings emphasize provider's vulnerability to stereotyping (van Ryn, Burgess, Malat, & Griffin, 2006; Moskowitz, Stone, & Childs, 2012; Burgess et al, 2014; Stepanikova, 2012), however, the conditions under which an unconscious stereotype and racial bias is likely to be activated in medical decision-making scenarios are still unclear.

Other important individual predictors may contribute to the occurrence of biases in evaluation and medical decision settings. In the next section, we will describe research focusing on ideological explanations, namely research on how medical authoritarianism and social dominance orientation is linked to status-based medical outcomes differentials.

Ideologies as an explanatory framework for Health Inequalities

Based on these previous findings, Burgess and colleagues (2011) investigated to what extent levels of authoritarianism would influence perceptions of chronic pain and, subsequently predict treatment decisions for White and Black patients. To this end, providers responded to a vignette depicting a male patient seeking relief for chronic low back pain in which patient race (White vs. Black) and verbal behavior (threatening vs. nonthreatening) were experimentally manipulated. In each vignette, providers were asked their perceptions about patient compliance and trustworthiness, and to what extent would they prescribe a stronger type or higher dose of opioids. Consistent with previous research, higher levels of medical authoritarianism were associated with a greater dislike for treating chronic pain, and greater concerns about opioid abuse or misuse (Merrill et al., 1995). However, findings did not support levels of authoritarianism predicting race-based differentials in treatment decisions. Specifically, providers high on medical authoritarianism were not less likely to prescribe the Black patient (vs. White) a stronger type or higher dose of an opioid, even when portrayed as a "threatening-patient" (Burgess, Dovidio, Phelan, & Van Ryn, 2011).

Since provider's empathy is a fundamental aspect of the quality of care and crucial to create a positive patient-provider interaction, van Ryn and colleagues (2014) examined, among other factors, whether social dominance orientation (SDO; Sidanius & Pratto, 1999) and medical authoritarianism (Merrill et al., 1995) predicted incoming first semester medical students' attitudes toward empathy. The results found both measures predicting independently attitudes toward empathy. Students higher on medical authoritarianism and SDO had more negative attitudes toward patient empathy. Such findings are very informative, in that they propose mechanisms through which providers preferences may operate when evaluating a patient.

Beyond individual differences, social influence processes profoundly impact intergroup attitudes and behavior, particularly *normative* social influence, as social norms based on the desire to conform to the orientations of others and to be accepted by them (Deutsch & Gerard, 1955). In fact, the functional nature of social norms, particularly in the regulation of social attitudes (e.g., Asch, 1952; Berkowittz, 1972) and of relationships that groups hold among each other (e.g.,

Turner, Hogg, Oaks, Reicher & Wetherell, 1987), has been widely demonstrated (for a review, see Moscovici, 1985), but remains unexamined in the medical decision-making domain.

Thus, this thesis focuses on a fourth explanation that complements the previous one – the influence of social norms. In particular, we examine whether Meritocracy as a social norm plays a role in healthcare inequalities (Costa-Lopes, Dovidio, Pereira, & Jost, 2013).

Before we proceed, it is important to clarify that there are many definitions of the concept of social norms (for a review, see Cialdini & Trost, 1998). In this thesis, we use the concept of social norms as a set of beliefs, shared and known by society in general, or shared by a particular group, which, without the force of the law, provide orientation or constrain social behavior. As such, individuals' belief and worldviews are largely a reflection of the existent social norms, where one was socialized in (Sherif, 1967).

As socially construed and shared beliefs, social norms can be prescriptive or descriptive. Prescriptive social norms provide the guidelines about how people ought to behave whereas descriptive social norms inform about how others act in similar situations (Cialdini, Kallgren, & Reno, 1991; Schaffer, 1983). Thus, social norms are important to consider in the health inequalities domain, particularly on the medical decision setting, because, as shared beliefs, these can powerfully shape whether one perceives discrimination, or the way those instances of discrimination are construed (Denton & Leitner, 2018), and importantly they are mental schemas that influence behavior (Pratto Tatar& Conway-Lanz, 1999).

1.5 Meritocracy

Before introducing the section dedicated to Meritocracy, it is important to make conceptual specifications regarding the content and type of meritocracy considered in this thesis. Meritocracy, as a social system, implies that outcomes as wealth, jobs, and power are distributed on the basis of hard work, strong motivation, and personal ability (Kluegel & Smith, 1986; Jost & Banaji, 1994).

As a socially construed and shared belief, Meritocracy refers to a set of beliefs involving socially shared perceptions of a society as meritocratic, which may or may not conform to the actual meritocratic nature of the society. Meritocracy encompasses both *beliefs* about how individuals from lower socioeconomic positions can move to a higher socioeconomic position in

society (i.e., individual mobility) through hard work and *explanations* about people's status within the society, and asserts that status differences in society are based on merit (Levy, West, Ramirez, & Karafantis, 2006; McCoy & Major, 2007). People who endorse meritocracy beliefs endorse the idea that society is meritocratic because there are few systematic barriers to success aside from their own efforts and abilities (Wiley, Deaux, & Hagelskamp, 2012). In contrast, people who reject meritocracy perceive that, for example, group membership, can limit one's chances in life (Major, Kaiser, O'Brien, & McCoy, 2007). As a belief about the way a society should be organized, that is, as a prescriptive norm, meritocracy conveys an idea of fairness and equal opportunities (Son Hing et al., 2011). As a norm about the way society actually is, that is, as a descriptive norm, meritocracy can have the consequence of justifying inequality because it provides explanations as to why individuals should only blame them selves for having a lower status position in the society (Jost & Hunyady, 2002; Major et al., 2002; Levin, Sidanius, Rabinowitz, & Federico, 1998; Sidanius & Pratto, 1999). In this thesis, meritocracy is used to refer to people's descriptive beliefs about whether people can succeed in society on the basis of their own efforts and abilities.

1.5.1 Origins and Definition

The term *Meritocracy* is credited to Michael Young, when he titled a satirical essay about a society governed by those possessing merit, as *The Rise of Meritocracy, 1870-2033* (Young, 1958). In that sense of the word, merit result of intelligence-plus-effort. In such a society, individuals would be identified at an early age and selected for appropriate intensive education, and evaluation would be made exclusively through test-scoring and qualifications.

In the book, the dramatic consequences of such a social system lead the reader to the conclusion that the social disadvantages of such a system are greater than the underlying principles, and therefore one ends the reading in 2019 by wondering why people would support the *Rise of a Meritocracy* and yet that is pretty much what it is supported today, at least in some Western societies (Duru-Bellat & Tenret, 2012; Mijs, 2016; Roex, Huijts, & Sieben, 2019).

A reason for the increasing interest in Meritocracy has to do with the rewarding-merit system where accordingly, wealth, jobs, and power are distributed on the basis of hard work, strong motivation, and personal ability (Kluegel & Smith, 1986; Jost & Banaji, 1994; Sen, 2000).

Consequently, such merit-based rewarding system is very appealing among progressive societies, particularly, those embodying a preference for social equity principles (Deutsch, 1975; Tyler, 2014).

In a psychological sense, Meritocracy beliefs broadly embrace the idea that equal opportunities exist, allowing upward social mobility (Feldman, 1983; Hochschild, 1996) in a way that individuals can change their economic and social circumstances (Taylor & Moghaddam, 1994). The amount of economic and social success achieved is determined by internal factors, such as hard work, ability, and individual responsibility, and not by privileged social relationships. Thus, individual merit, rather than social or power categories (Tajfel, 1978), determines individual success because any individual can improve their social status as long as they work hard, are motivated, and talented (Kluegel & Smith, 1986; Jost & Banaji, 1994).

1.5.2 Meritocracy and Intergroup Relations

The concept of meritocracy can be found in a variety of highly influential social psychological frameworks. For example, in Social Identity Theory's (SIT) framework (Tajfel & Turner, 1979) Meritocracy is reflected in the concept of individual social mobility. As an ideology, the belief in Meritocracy serves to legitimize inequality between individuals and groups within a society (e.g., System Justification Theory, Jost & Banaji, 1994). And finally, the merit principle is also reflected in the distributive justice literature in discussions of the principle of equity (Deutsch, 1975; Tyler & Smith, 1998).

The importance of considering a socially shared system of beliefs and group status as key components of intergroup dynamics has been initially introduced by Tajfel and Turner (1979) within the framework of Social Identity Theory. In fact, in Social Identity Theory, we find one of the first references to the importance of Meritocracy for intergroup relations. Described as a socially shared belief on social mobility, Meritocracy is framed as a social context important for understanding the circumstances in which members of disadvantaged groups: (a) accept their low social position; (b) improve their personal position, or (c) improve the groups' social position.

Within this conceptual framework, three types of socio-structural determinants lead to each of the previous reactions: (1) the legitimacy of the social position – i.e. the group deserves the disadvantaged position; (2) the stability of the social position – i.e. the possibility of improving the social position and increasing access to resources; (3) the permeability of boundaries between groups – this meant the possibility of members leaving a lower status group and acquiring the membership of a higher status group. It is within the scope of the later determinant – the permeability of boundaries between groups - that Meritocracy beliefs are discussed. In this respect, it is generally assumed that the existing system allows hard-working individuals with a strong motivation and ability to improve their social position within the society (Kluegel & Smith, 1986). Thus, because the social system is perceived to be open to mobility, low status members take actions that promote their individual position (Ellemers, 2001; Ellemers & Barreto, 2009). As a consequence, of this individual social mobility (as opposed to a group upward mobility), values of individualism override the communal values. As a result, the belief in a Meritocracy is accepted as a fair (but unequal) system, making individuals less likely to support collective action, and therefore less oriented toward social change (Wiley, Deaux & Hagelskamp, 2012).

Furthermore, social status based on the merit in which a person is held by members of the status group emerge as an important dimension in Turner and Brown (1978) research where the authors showed that when the perception of status was seen as legitimate, the high status group favored the in-group and the low status group favored the out-group. These results then drew attention to the importance of considering group status and legitimation as key components of intergroup dynamics, particularly the combined effect of status perceptions and system beliefs aiming at preserving the status quo (Tajfel & Turner, 1979; Tajfel, 1982).

These Social Identity Theory claims about the consequences of Meritocracy beliefs for preventing social change and preserving the status quo, through the stability of the social system, is consistent with theorizing on Meritocracy as an ideology.

From an ideological approach to intergroup relations Meritocracy, beliefs are one among various ideologies that serves to maintain *status quo* in stratified societies (Major & Kaiser, 2017). From this perspective, Meritocracy beliefs are used to describe how hard work and upward social mobility are used to interpret situations in ways that justify social inequalities (Jost, Banaji, & Nosek, 2004; Jost & Hunyady, 2005).

Accordingly, within asymmetrical power relations, the formation of legitimizing status beliefs (Major & Kaiser, 2017) has the function of maintaining social, racial or economic inequalities, and this has consequences for intergroup relations. In particular, these consequences are less favorable for members of minority groups. Thus, these social status-legitimizing beliefs are a piece of the machinery that feeds a hierarchical and unequal social system. In the context of socially critical decisions, these beliefs can have a significant impact on people's lives insofar as they can facilitate an unequal allocation of resources depending on the target's social status. Later on, we will discuss what socio-cognitive mechanisms can explain an unequal allocation of resources.

Meritocracy beliefs may have dual implications for intergroup relations. One implication is that Meritocracy beliefs can operate as a *social equalizer*, allowing people to achieve higher status, or a social *justifier* meaning (e.g., Levy et al., 2006), acting as a legitimizing status belief (Major & Kaiser, 2017) by offering a socially acceptable explanation that stabilizes existing status differences. If the *justifier* meaning becomes increasingly salient, in an interracial comparison situation, the salience of race crossed with migrant status may become a judgment cue, given that meritocracy values are linked to racial concerns (Katz & Hass, 1988; Biernat, Vescio & Theno, 1996). In a context strongly oriented not to discriminate against any person on the basis of their sexual orientation, religion or ethnic-racial origin, it is possible that meritocracy serves as a normative context facilitating non-racial cues that people "need" to discriminate, particularly among aversive racists (Biernat,Vescio & Theno, 1996; Dovidio & Gaertner, 2000).

Whether Meritocracy beliefs act as an equalizer or justifier depends on their correspondence with the actual dynamics of the social system. When a system is truly meritocratic, stronger mobility beliefs may help galvanize efforts among appropriately motivated and capable individuals for social mobility. However, when a system is not meritocratic but people believe that it is a meritocracy, members of low status groups may be inclined to see their social position as legitimate and thus be accepting, while high status group members may infer low status groups as individually responsible for their disadvantage position in the social system (McCoy & Major, 2007; Rüsch, Todd, Bodenhausen, & Corrigan, 2010).

The other, largely independent implication, is that Meritocracy beliefs can be descriptive, characterizing perceptions of the current social system, or prescriptive, providing a standard of what ought to be (Son Hing et al., 2011). For example, while descriptive Meritocracy -- the belief

that Meritocracy exists -- is related to other legitimizing ideologies, such as political conservatism, racism, social dominance orientation, and right-wing authoritarianism, prescriptive Meritocracy -- the belief that Meritocracy should exist -- is argued to be unrelated to explicit and implicit negative attitudes toward low status groups (Son Hing et al., 2011).

1.5.3 Antecedents of Meritocracy

Previous research suggests that Meritocracy beliefs activation is contingent with self and group-interest motives (Cokley et al., 2007; Garcia et al., 2005), with the accuracy of information provided (Levy et al., 2006), with the salience of social mobility (Day & Fiske, 2017), with a sense of powerlessness and lack of control (Goode, Keefer, & Molina, 2014; van der Toorn, Feinberg, Kay, Tyler, Willer, Wilmuth, 2015) or when they face information that threatens the system (Ledgerwood, Mandisodza, Jost, & Pohl, 2011). For example, Ledgerwood and colleagues (2011) suggest that the desire to justify the status-hierarchy leads individuals to defensive cognitive and behavioral processes to protect and bolster the notion that hard work leads to success in society. Furthermore, in the face of contradictory evidence that threatens the social system (i.e., personal control: success is the result of chance), the activation of Meritocracy beliefs increases the legitimacy of the social system.

Consistent with these findings, Goode, Keefer, and Molina (2014) found that one of the reasons that motivate people to support social systems that claim to distribute resources based on hard work and effort, even when those systems seem unfair, is the perception of personal control. In this study, participants were randomly asked to recall a particular incident in which they either felt (a) a complete lack of control or (b) complete control over the situation, and after the prime, Meritocracy beliefs were assessed. The findings show that in the situation where personal control was threatened participants were significantly more likely to support Meritocratic beliefs, which in turn impacted perceptions of future economic success.

So why would people support Meritocracy beliefs? As Lerner (1980) put it, ‘‘People want to and have to believe they live in a just world so that they can go about their daily lives with a sense of trust, hope, and confidence in their future’’ (p. 14). But there are also social consequences

for intergroup relations, insofar as people who rationalize the structure of the social hierarchy are less likely to improve upon it. And particularly, lower status social groups are disproportionately affected as described below.

1.5.4 Consequences of Meritocracy beliefs for Intergroup Relations

In contemporary Western society's people generally, think of themselves as being meritocratic and hold the conviction that individual advancement is the way to social equality (Bobo & Hutchings, 1996; Ellemers, 2003; Ellemers & Barreto, 2009; Kluegel & Smith, 1986). As a result, Meritocracy beliefs are widely shared and largely stable.

However, a meritocratic worldview may hold a downside. Particularly, when a system is not meritocratic but people believe that it is a Meritocracy, such a mismatch, it is likely to have significant social implications for intergroup relations. For example, members of low status groups may be inclined to see their social position as legitimate and thus be accepting, and high status group members may logically infer low status groups as individually responsible for their disadvantaged position in the social system (McCoy & Major, 2007; Rüsch, Todd, Bodenhausen, & Corrigan, 2010).

Moreover, Meritocracy beliefs seem to operate as a facilitator of intolerance toward low status groups, by rendering access to attributional, stereotypical and negative inferences about specific social groups (Biernat, Vescio, Manis, 1998). For example, people more easily show implicit negative attitudes or infer negative internal attributions and stereotyping, after being primed with Meritocracy beliefs (vs a control group) (Costa-Lopes et al., 2017; Ho et al., 2002; Lima, Pinheiro, Ávila, Lima & Vala, 2006).

In addition, it has consequences for preserving the *status quo* of low status groups in asymmetrical contexts (Jost, et al., 2003). And how? For example, opposing policies aimed at promoting greater equality between groups (Wellman et al., 2015). However, this is true only when Meritocracy is used as a *justifier* (Levy et al., 2006), and is more likely to be a justifier when it is also perceived to be a *descriptive* social norm (Son Hing, et al., 2011). And that is because when prescriptive, Meritocracy favors acceptance of merit-upholding social policies designed to bring about more intergroup equality in the workplace (e.g., positive discrimination) and more

opposition to a merit-violating policy (Chatard et al., 2006). This is consistent with correlational data on principled Meritocracy suggesting that people with stronger prescriptive beliefs about merit are more opposed to merit-violating policies but not more opposed to merit-upholding program policies than are people who weakly endorsed the merit principle (Bobocel, Son Hing, Davey, Stanley & Zanna, 1998; Davey, Bobocel, Son Hing & Zanna, 1999).

When causal attributions are embedded, it serves to decrease the perceptions of group-based discrimination. For example, McCoy and Major (2007) found that telling participants that a female target has been discriminated against due to sexism led participants exposed to the salience of Meritocracy beliefs (*vs.* neutral condition) to perceive less prejudice against the female candidate and to endorse gender stereotypes to a significantly higher degree; Redesdorff and colleagues (2016) in a replication of this paradigm found that people also judge the female target as less competent. Probably attributing a discriminatory result to external causes challenges the legitimacy of group-based discrimination, so it is necessary to neutralize potential threats that call into question the legitimacy of such discrimination. To this end, activating in people's minds Meritocracy beliefs might evoke stereotypical inferences (e.g., competence), which in turn, are used to neutralize group-based discrimination perception.

So far we have been describing the consequences for dynamics involving low and high status groups, but what are the direct consequences for members of lower status? For disadvantaged groups, one of the consequences is that when primed with Meritocracy beliefs peoples psychological and self–esteem is affected. Especially among marginalized groups, such as for overweight women, being exposed to Meritocracy beliefs (*vs.* control condition) cause lower well-being and self–esteem (Quinn & Crocker, 1999).

In school, low socioeconomic students performed significantly lower in a performance test than high socioeconomic students, after primed with Meritocracy beliefs, compared to students in the control group (Darnon et al., 2018).

A third finding suggests that in the face of discrimination when people are previously and subtly reminded about Meritocracy beliefs, they are more prone to blame themselves than the system. And this is particularly true for members of low status groups (McCoy & Major, 2007). This evidence is consistent with the idea developed by Jost and colleagues that system-justifying beliefs serve the palliative function of reducing the negative effect of an unfavorable situation, especially, but not exclusively, among low-status groups (e.g., Jost & Hunyady, 2005).

Thus descriptive Meritocracy through the belief that (a) hard work, effort, cognitive ability, and competence leads to success; (b) individuals are responsible for their own situation; and (c) social mobility is available to the ones who demonstrate the largest efforts and capabilities allows the transformation of such beliefs into *status* legitimizing beliefs (e.g., justification of one's position in the society) and *system* legitimizing beliefs (e.g., the structure of the social system).

Hitherto we have seen that if the belief in Meritocracy allows maintaining certain stability around social inequalities, this effect ends up having socially high and negative costs, primarily for individual members of low status groups. In the following section, we describe how intergroup bias may be informed by the social context, particularly how Meritocracy as a social norm can influence cognitive and motivational processes explaining group-based discrimination.

1.5.5 Meritocracy, Intergroup Relations, and Health Inequalities

Meritocracy beliefs are important to consider in the health inequalities domain, particularly within the medical decision-making contexts, because, as shared beliefs, they can powerfully shape whether ones perceive the onus of responsibility for a person's life outcomes on the person rather on structural factors (e.g., discrimination), and importantly can act as mental schemas influencing behavior (Pratto, Tatar, & Conway-Lanz, 1999). In fact, research shows that rationalizing decisions based on internal attributions (instead of structural factors) can possibly increase negative reactions toward disadvantaged groups (Cozzarelli et al. 2001; Rüsch et al. 2010), and justify existing status hierarchies as deserved (Pratto, Tatar, & Conway-Lanz, 1999; Sidanius & Prato, 1999). Consequently, these inferences can disproportionally affect members of relative disadvantaged groups.

How would meritocracy foster negative cues leading individuals to behave or react less favorably toward low status targets? There are probably several explanations for this question. We draw on different lines of research suggesting a socio-cognitive function of Meritocracy beliefs at different domains of analysis – cognitive, motivational and societal.

A first explanation pertains to the cognitive domain: the use of heuristic inferences and dispositional attributions would be easier for individuals since it would require less cognitive effort (Tajfel, 1981; Heider, 1958). The distinction between internal and external causality is essential because it will enable the concept of legitimacy to be operationalized with regard to the social position that the person holds in society. According to the Fundamental Attribution Error theory (Ross, 1977) people tend to underestimate dispositional factors (i.e. internal causality) in detriment of situational factors (i.e. external causality). For example, individuals are more willing to justify poverty, economic and educational success through the differences in merit (as a sum of effort and capacity) and less likely to explain these differences in structural terms, such as the social structure of the system that governs them (Carriero, 2016; Warikoo, & Fuhr, 2014; Mijs, 2019; Seron, Silbey, Cech, & Rubineau, 2018). In this sense, meritocracy as a socio-normative framework makes internal attributions more intuitive, as they require less effort, for the majority of individuals.

The prevalence of internal attributions, in addition to being related to cognitive processing, also provides greater control over one's behavior and environment (Jost, Banaji, & Nosek, 2004; Kay & Eibach, 2013; Lerner, 1980). By conveying the motivational idea of individual responsibility and control over successes and failures, Meritocracy beliefs provide psychological comfort through the illusion of control necessary to give meaning and significance to life events (Lerner, 1980).

A third and last explanation relates to the functional nature of social norms that regulate contemporary societies. Both cognitive and motivational processes facilitate the production of a palliative effect designed to reduce psychological discomfort (Jost, Pelham, Sheldon & Sullivan, 2003; Bahamondes, Sibley, & Osborne, 2019), especially among endorsers of social equality principles, living in Western and democratic societies. This palliative effect potentially has an informative function: assuming Meritocracy as an adaptive social norm, its function is to communicate behaviors that are efficient, informative and relevant (Allison, 1992) to the stability of societies and organizations characterized by social stratification (e.g., Billig, 1982; Reicher, 1996) and inequalities (Laurin, Gaucher & Kay, 2013).

Overview of the current thesis

Medical decision making is complex since individuals rely on medical evidence and on the symptoms expressed by patients who share common characteristics, including race and ethnicity (Dovidio & Fiske, 2012). However, as earlier described, non-medical factors are accounted for decision making, particularly the patient's social status. Beyond the evidence documenting status-based bias in medical decision-making, three social psychological perspectives investigate the association between low status groups and unfavorable medical decisions.

The first perspective focuses on implicit prejudice, in explaining bias in medical decisions and how it can negatively affect communication trust and treatment decisions. Does implicit bias predict racial bias treatment decisions? The second perspective takes a socio-cognitive approach to bias in medical decision-making highlighting provider's vulnerability to stereotyping. Does implicit stereotypes affect the interpretation of clinical symptoms, which in turn informs diagnosis and treatment referral? And the third perspective focuses on individual ideological differences to explain status-based medical outcomes differentials: do hierarchy-legitimizing ideologies (e.g., RWA, SDO) predicts status-based variations in medical care? The three perspectives offer a social psychological perspective on group-based health inequalities and as such, are complementary because prejudice, stereotypes, and ideologies likely have relations with one another (Fiske, 1988).

In addition to the complexity involved in the medical decision-making process, in general, the outcomes resulting from the medical decision are likely to be the product of multiple influencing factors of the same, and often, different levels of analysis: individual factors, relationships at the interpersonal and intergroup levels, and societal norms, all potentially influence people's attitudes and social behaviors (Doise, 1980/1986). Thus, in order to understand the pervasive bias in medical decision making, it is necessary to investigate the phenomena from different, yet complementary, levels of analysis.

In the present thesis we offer a novel and complementary perspective: the influence of social norms. In particular, we examine whether Meritocracy norm plays a role in healthcare inequalities. We do so by investigating the impact of Meritocracy on socially critical decisions, in the medical context and involving low status groups, as the case of African immigrants.

By and large, the present work seeks to investigate the following questions: Does social status influence decision-making in a medical resource allocation scenario? Is a low status patient

(e.g. Black immigrant) less likely to be prioritized when the meritocratic norm is salient? Thus we investigate whether target status and meritocracy norm influence medical decisions, particularly in scenarios of scarce medical resources. More specifically, the current research focuses on the relationship between social status and meritocracy and how they interplay in decision-making involving members of low-status groups in medical resource allocation scenarios. Particularly, the rationale behind this model is the following: If meritocracy beliefs state that one's social status, depend on individual effort, ability, and hard work, then when the idea of meritocracy is made salient in people's mind they will probably use heuristic inferences and dispositional attributions from patient's social status. Particularly, low status targets are seen responsible for their life outcomes, because 'they did not work hard enough' or 'they did not have the personal skills' to climb up the social ladder, or even that 'they did not prevent themselves from getting the disease' therefore, in a way, they deserve what they get (Lerner, 1980). In other words, when meritocracy is made salient, low status individuals are seen less favorably and as personally responsible for their predicament (McCoy & Major, 2007). As such, in decision – making about prioritizing patients in a critical medical scenario, low status patients may be more likely to receive a less favorable decision.

The proposed relations between social status and meritocracy investigated in this dissertation are represented in Figure 1. It should be noted that in the initial rationale of the theoretical model, meritocracy was the factor that would facilitate less favorable decisions toward the low status target. In addition, meritocracy would operate as a facilitator of a) implicit prejudice and b) legitimizing perceptions (e.g. responsibility stereotypes and/or racial stereotypes). As such, the impact of meritocracy on medical decisions would occur through changes in 1) the level of implicit prejudice and 2) legitimation perceptions. Thus implicit prejudice and stereotypes were initially proposed in the theoretical model as mediators.

However, throughout the studies, the results seemed to point to the idea of meritocracy as a justifier and, from this perspective, we reconsider the initial proposal of prejudice as a mediator, and discussed whether meritocracy could be used by individuals in ways that satisfy their racial orientations and preferences. With this shift in mind, implicit prejudice ends up assuming a central role. For this reason, the model proposed here places prejudice as a moderator, however, we did not test the actual relationship among prejudice, social status and meritocracy on medical decisions. For this reason, prejudice is represented with dashed lines, and its role in the relationship

between social status and meritocracy in medical decisions is discussed in more detail in the future directions section of this thesis.

Additionally, within the research process described from here onwards, we introduce other factors, not considered in the initial theoretical model, as potential moderators of the relationship between social status and meritocracy. Particularly, we experimentally manipulate the type of causal attribution (responsibility: high *vs.* low) and time pressure (high *vs.* low) to explore circumstances promoting the strength of the social status - meritocracy relationship. For this reason, we show the initial theoretical model, representing the relationship between social status, prejudice and meritocracy and the relationship among these variables. We discuss the role of the subsequent moderators in the respective studies and in the discussion section.

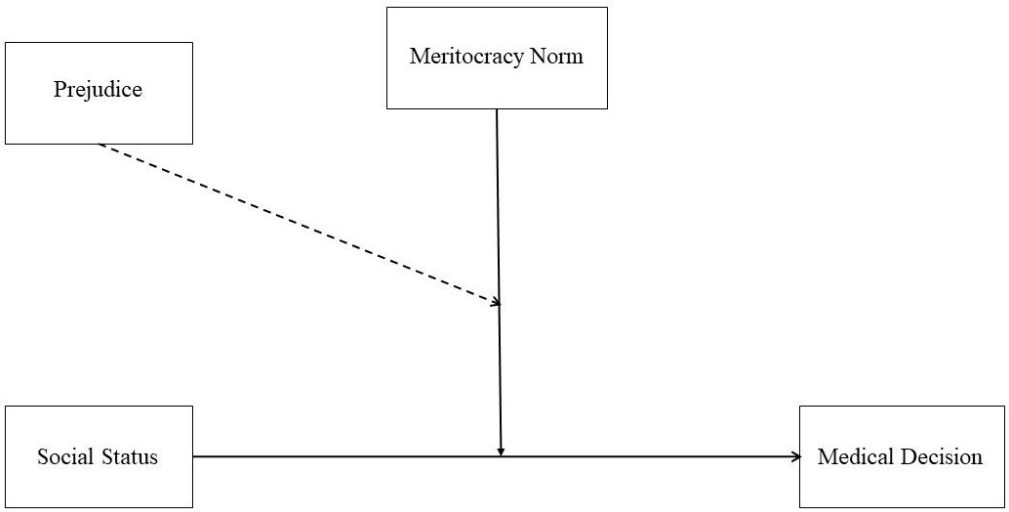

Figure 1. Proposed relations between social status, prejudice and meritocracy in medical decision-making.

To test the hypothesized relations among the variables, seven empirical studies and one systematic review were undertaken. These studies are presented in five empirical chapters, organized as articles, and as such may occur redundancy between the general framework, presented in Chapter I and the specific theoretical overview in each study.

In chapter II we begin exploring the impact of social status on medical decisions with laypeople and we further investigate the role of meritocracy beliefs. We show that when presenting

the same disease, participants did not distinguish between low and high-status patient; however, when presenting vignettes with different diseases, low-status targets (*vs.* high status) were marginally less likely to be prioritized**.** Furthermore**,** prioritization of patients for a heart transplant as a function of target's status group was more likely to occur when the high-status patient was seen with the *congestive heart failure* medical condition, regardless the frame of the reference presented to participants. Subsequent analysis shows that when the high status is evaluated *after* the low status, there is an overall tendency to assign a higher priority to the high status. And this higher priority given to the high-status patient is slightly higher for meritocracy endorsers (*vs.* rejecters).

In chapter III we investigated the salience of meritocracy on medical decisions toward low status targets. In addition, we experimentally manipulate the moderating role of responsibility. We show that when meritocracy is made salient, participants assigned a higher priority to low-status target, particularly in a situation where internal attributions (e.g., high personal responsibility) are salient. One possible explanation has to do with the fact that participants have unlimited time to think, which in turn could lead to a possible compensatory decision, more favorable to the low status target (*vs.* high status). As such, in the following study, we explore this alternative explanation, adding a time pressure manipulation. As predicted, we show that in a situation where internal attributions (e.g., high personal responsibility) are salient, meritocracy predicts a less favorable outcome toward the low status target (*vs.* high status), particularly when participants are under pressure. One possible explanation has to do with the motivation to control prejudice, in that when having unlimited time in deciding, participants not only intentionally suppress negative attitudes, but also overcorrect one's responses toward the low-status target. Thus when limiting conscious processing, compensation no longer occurs. As such, the motivation to control prejudice in the high-pressure condition should be reduced. We explore this hypothesis in a subsequent study. As predicted, when under pressure, controlling prejudice was no longer necessary, in that participants in the high-pressure condition showed a lower motivation to control prejudice, which in turn was associated with a more unfavorable evaluation of the low-status patient. In contrast, in the low-presssure condition, participants show a higher motivation to control prejudice, which in turn was associated with a lower bias in medical decision-making.

In chapter IV we present a systematic review. In some of our experiments, for example, we found Meritocracy beliefs positively predicting outcomes toward the low-status target; in other

experiments, we found Meritocracy beliefs negatively predicting outcomes toward the low-status target. Thus, the purpose of this systematic review was to (a) summarize the content of the different prime tasks; (b) summarize prime manipulation checks effectiveness, and (c) analyze whether priming Meritocracy predicted less favorable outcomes toward low status groups. Results across studies show that despite the existing differences in the components highlighted, the salience of any of the Meritocracy dimensions facilitates the use of internal causal attributions, negative evaluations and stereotyping toward low status groups, affecting negatively decisions involving low-status group members, particularly in organizational contexts.

In chapter V we extended the research into the medical context, investigating the impact of social status on medical decisions with medical students and further investigating the moderating role of meritocracy beliefs. In this study, beyond a behavioral measure – prioritization of the patient for medical treatment, we also assess perceptions on the treatment benefit, and of target competence in health. Regarding the confidence on the benefit of the treatment**,** participants showed higher confidence on the benefit of the treatment for low-status target (*vs.* high status), even when low-status target (*vs.* high status) is perceived as less competent and responsible in following the medical treatment. Regarding the prioritization of patients, participants did not distinguish between low and high-status patients. However, the data suggests meritocracy endorsement explains differentials in the recommendation of the low and high status targets. Specifically, among the meritocracy-endorsers, the likelihood of distinguishing between patients because of their social status is significantly greater than among the meritocracy-rejecters, in that Meritocracy-endorsers were more likely to prioritize the low-status target than meritocracy-rejecters. This result is the opposite of what we predicted. In fact, we predicted that meritocracy-endorsers would be less likely to prioritize the low-status target than meritocracy-rejecters. One possible explanation could be that meritocracy-endorsers operated through the *social equalizer* aspect of Meritocracy beliefs, reflecting a greater belief in societal fairness and social equality. Given that it is the *justifying* meaning of Meritocracy beliefs that is relevant for the production of status-based decisions differentials, in the next study we specifically manipulated the salience of the *justifier meaning* of Meritocracy. The results show that medical students prioritize differently low and high status patient, showing a preference for the low status patient. This preference is stronger in the inconsistent stereotypically condition, where low status is significantly favored over the high status patient. In contrast, in the face of consistent stereotypical cues this preference for

low status patient no longer occur. Moreover, the compensation effect significantly decreases when the *legitimizing meaning* of meritocracy was salient, in that medical students significantly decrease the differentials in the prioritization of the low status patient, compared to merely *endorsing* meritocracy beliefs condition (i.e., baseline condition).

In the last empirical chapter, we address an important issue that was left unanswered across all studies. Throughout all previous research of this thesis, low status targets were systematically portrayed as an African Immigrant. However, the coupling of the two social categories - migrant status and race – makes it impossible to ascertain the contribution that each category makes to decision-making. Thus independent evaluations of migrant status and the perceived race remained to be considered. In this last study, we investigate explicit biases in medical decisions towards targets varying in migrant status and race. The results show that immigrant patients who were also Black were less likely to receive priority for heart transplant than all other patients.

Chapter II

Investigating the impact of social status on medical decisions with laypeople

And the role of supporting meritocracy beliefs

Study 1a

Overview

There are a number of challenges for a person seeking to make fair decisions without discriminating against individuals due to their membership in a particular social group. Moreover, it is possible that when recommending patients for the appropriate treatment or a medical procedure a number of factors such as health policies, medical guidelines, and personal states and cognitions influence medical judgment and decision making.

However, a factor likely to influence directly and indirectly judgment and decision making is patient's social status (Blair et al., 2011; Major, Mendes, & Dovidio, 2013; Penner et al., 2013; Smedley, Stith & Nelson, 2003). Systemically, patients of low status groups tend to receive less favorable medical outcomes, relative to patients of high status groups (Bogart, Catz, Kelly, & Benotsch, 2001; Burgess et al., 2008; DiCaccavo, Fazal-Short, & Moss, 2000; Drwecki, 2001; Green et al, 2007; Ponterotto, Potere & Johansen, 2002; Sabin, Rivara, & Greenwald, 2008; Stepanikova, 2012; Schulman et al., 1999; Thamer et al 2001).

In one of the first studies showing the impact of patient's social status on clinical decisions (Green et al., 2007), physicians read a scenario about a patient displaying substantial distress, suggesting an acute cardiac medical condition, and were asked about the appropriate treatment to be considered to a patient expressing those symptoms. Additionally, physicians completed measures on explicit and implicit bias. The goal was to test whether physicians would show bias and whether this bias would affect the medical decision. The results showed that the low status patient (cued as a Black patient) was less likely to be recommended for the appropriate treatment, particularly among physicians showing higher implicit bias.

This experiment remains one of the few showing that provider bias does affect medical treatment decisions. Nevertheless, in this study physicians evaluated a Black *or* a White patient, with the exactly same symptoms. Thus, the external validity of this important finding may be threatened since, in actual medical practice, physicians, often see a sequence of patients with similar (albeit not identical) symptoms and medical conditions. Thus, how a patient is fairly

treated may be affected by the social comparison situation when evaluating patients from different groups at a time.

In the present research, participants evaluated an African Immigrant *and* a Portuguese patient. With this experimental design, we control the individual variability. However, due to the comparative paradigm, we fully randomized the (a) order of presentation of the target (i.e., the frame of reference: intergroup nature *vs.* intragroup nature) and (b) the disease (same *vs.* different).

These two additional factors - order of presentation of the target and the disease (same *vs.* different) - are important for a number of reasons. Firstly, from a Social Identity Theory perspective, in a situation involving the evaluation of several medical cases, varying on patient attributes (e.g., in-group member: Portuguese *vs.* out-group member: African Immigrant), the order of presentation of the target can have implications in perceived outgroup stereotypicality (Bartsch & Judd, 1993). Accordingly, it is possible that when an African immigrant target is evaluated first by a Portuguese person it may be categorized less as an individual, and more as a member of an out-group, as Black or immigrant. As such, an intergroup comparison process may take place. In contrast, when a Portuguese target is evaluated first by a Portuguese person it may be categorized more as an individual, and less as a member of a group, as Portuguese (Simon, 1995; Haslam & Oakes, 1995). As such, an intragroup comparison process may occur. Thus, whether the decision-making takes place in an intergroup (*vs.* intragroup) situation is likely to produce intergroup differences (Bartsch & Judd, 1993). We reason that if prioritization for the medical procedure varies as a function of the patient's attributes (e.g., Portuguese *vs.* African Immigrant), then it is likely to be qualified by the frame of reference (intergroup comparison *vs.* intragroup comparison). The frame of reference refers to which target is evaluated first. If an African immigrant is evaluated *first*, that represents an intergroup comparison, because it activates an intergroup context; if a Portuguese is evaluated *first*, that represents an intragroup comparison, because it activates an interpersonal context.

Because the identity-of-first-group is important, we reason that a Portuguese participant evaluating first an African Immigrant might activate an intergroup comparison context, and this activation is more likely to produce differentials in the medical decision, in that the African Immigrant is less likely to be prioritized for the medical procedure, relative to the Portuguese

patient. In contrast, we reason that in an intragroup comparison situation, the African Immigrant patient is likely to be prioritized as much as the Portuguese patient.

Secondly, presenting equally "qualified" patients, with variations in the disease (the same *vs.* different) is important when studying social biases. From a prejudice perspective, when additional factors, other than patient social category, are present, the likelihood of bias increases (Dovidio & Gaertner, 2000; Moss-Racusin, Dovidio, Brescoll, Graham, & Handelsman, 2012). For example, Dovidio and Gaertner (2000) randomly assigned participants to evaluate candidates for a job position. Specifically, White participants evaluated a Black or White candidate who had credentials that were systematically manipulated to represent strong, moderate or very weak qualifications for the positions. The findings show that when the candidate's credentials clearly qualified them for the position or when the credentials were clearly not appropriate, there were no differences between Black and White candidates. Only when the qualification for the position was less obvious and the appropriate decision was more ambiguous (moderate qualifications) was the Black candidate less recommended than the White candidate with the exact same credentials. The important point in their research was the ambiguity of the context and how it triggered race-based differentials. This finding is relevant for the present research because, it suggests that individuals may be more able to discriminate between targets when the evaluation triggers a higher ambiguity, as for example, presenting medical cases with different diseases. Thus, the manipulation of eligible candidates' disease was made to examine whether the prioritization for the medical procedure would be qualified by the presence of different diseases (vs. . same disease).

Considering previous research suggesting discrimination against Black immigrants to be more likely to occur in situations where decisions makers have the opportunity to evaluate the candidates based on factors other than their social category (Dovidio & Gartner, 2000; Gartner & Dovidio, 2004), we expect decisions toward the African Immigrant patient to be more unfavorable when evaluating medical cases portraying patients with different diseases. In contrast, when presenting medical cases with the same disease, we expect no differences between the African Immigrant and Portuguese patient.

Healthcare practitioners, future health providers, and laypeople are likely to be susceptible to bias. Obviously, providers and laypeople have different levels of medical expertise, nevertheless, both process non-medical information that is likely to elicit inferences about the

patient (FitzGerald & Hurst, 2017). In fact, studying lay people's biases is relevant and informative for understanding basic psychological processes negatively affecting attitudes and behaviors. Thus, having in mind the goal of developing a decision-making paradigm that would be not only informative about basic psychological processes occurring in decision making, but also relevant for subsequent studies with medical students, study 1 was carried out with a sample of laypeople.

Regarding our hypothesis, we expect the African immigrant to be less prioritized for the transplant. We expect this effect to be qualified by the type of disease, in that we expect the African immigrant to be less prioritized for the transplant when portraying patients systematically with different diseases. Additionally, we expect the target effect to be qualified by the frame of reference, in that we expect the activation of an intergroup context to be less favorable for the African immigrant. Finally, we hypothesize the ethnic-racial bias in prioritization to be stronger when portraying patients with different diseases in the intergroup frame of reference, thus we expect a three-way interaction.

Method

Participants. A total of 105 participants (lay people) completed the online survey in exchange for entering a 20 euro voucher lottery. Eight participants who completed the survey but indicated a non-Portuguese nationality were removed. Final sample comprised 97 participants (79 % women, M_{age} = 29.70, SD_{age} = 10.78) varying in educational attainment, from high school degree (10.5 %), bachelor's (45.3%), Master's (41.1%) and doctorate (3.2%) degree.

Procedure. Participants were told that they would take part in two independent surveys due to convenience reasons and maximization of the number of participants. In the alleged first study, participants read a previous fictitious note to familiarize them with the issues surrounding organ transplants in Portugal. Particularly, they were told that a shortage of donors has sharply limited organ transplantation, increasing the number of patients on waiting lists for solid organ transplantation. As a result, participants would be asked to imagine themselves as part of an evaluation panel with the mission of assigning a priority rating to previously unrated patients on a

waiting list for cardiac transplant. After reading the criteria guidelines, designed to give an objective measure, participants were given two patient files. Participants are not explicitly told to follow the guidelines provided in the introduction. They were invited to give their opinion regarding the level of priority that should be given to each patient, a Portuguese patient (high status) and an African immigrant patient (low status). The two hypothetical medical cases could be understood without technical knowledge.

As described in Table 1, each participant received a condition varying the order of presentation of the patient (African immigrant first *vs.* Portuguese first), the disease (equal *vs*. different). In the different-diseases condition, the order of coronary heart disease and the heart failure disease presentation varied systematically. Other than that, the patients were very similar in terms of both personal information (e.g., age, marital status, number of children) and the details of their medical history to complete the priority rating (e.g. time on a waiting list, general condition). After rating priority to each patient file, participants were asked in an open-ended question to explain their decision on the priority score given to the patient[4]. Following this task, participants were asked to proceed to the second study designed to assess a set of beliefs about how society works. A descriptive meritocracy[5] measure was completed, as well as answering to the manipulation check and demographic questions. Full randomization was set with a total of 8 randomized blocks.

Measures

Dependent variable. Using a 7-points rating scale, participants were asked to indicate the level of priority for heart transplant they would like to assign to each clinical case, from 1= low priority to 7 = high priority, with a 4 = moderate priority being the correct decision, based on the patient file and the rating criteria provided.

[4] As a first study, we have included this question with the goal of gathering information about the motivations to prioritize one patient versus the other, in order to gain a deeper understanding about the justifications underlying the prioritization. Since it was an exploratory and complementary issue, we did not present data on this question for this study.

[5] Data on this measure will be explained and analyzed in Study 1b.

Table 1. Experimental design

Disease		First Target Evaluated	Second Target Evaluated
Same	Condition 1: Coronary Heart Disease		
	Intergroup Context	African Immigrant	Portuguese
	Intragroup Context	Portuguese	African Immigrant
	Condition 2: Congestive Heart Failure		
	Intergroup Context	African Immigrant	Portuguese
	Intragroup Context	Portuguese	African Immigrant
Different	Condition 3: Coronary heart first		
	Intergroup Context	African Immigrant	Portuguese
	Intragroup Context	Portuguese	African Immigrant
	Condition 4: Congestive heart failure first		
	Intergroup Context	African Immigrant	Portuguese
	Intragroup Context	Portuguese	African Immigrant

Analysis Strategy

We examined whether a) male and female participants, and b) participants who failed in the target manipulation check would respond differently to the African Immigrant and Portuguese target. As to target manipulation check, those who failed to correctly identify the non-Portuguese target did not prioritize differently the African Immigrant and Portuguese target, F (1, 94) < 1, so we collapsed participants in all analyses. As to gender differences, main effects were found by gender, F (1, 94) = 3.83, p = .05, η_p^2 = .04, and also target × sex interaction was found to be significant, F (1, 94) =6.99, p = .01, η_p^2 = .07. These findings suggest that, overall, male respondents were more likely to assign a higher priority rating to both patients, comparatively to female participants. Additionally, male respondents were more likely to make differential decisions between African Immigrant (M= 4.95; SE = .22) and Portuguese target (M=5.45; SE = .25), favoring the latter. Female participants did not significantly distinguished between both

patients [$M_{African\ Immigrant}$= 4.75 (.12); $M_{Portuguese}$= 4.70 (.11)], therefore sex was controlled in all subsequent analyses.

Table 2. Mean indices of prioritization for a heart transplant as a function of the disease variability (equal *vs.* different diseases), the order of disease presentation (coronary heart *first vs.* heart failure *first*) and the group of reference (intergroup *vs.* intragroup).

	Same Disease				Different Diseases			
	Coronary heart (N=21)		Heart Failure (N=21)		Coronary Heart *first* (N=28)		Heart Failure *first* (N=27)	
	African Immigrant	Portuguese	African Immigrant	Portuguese	African Immigrant	Portuguese	African Immigrant	Portuguese
Intergroup Comparison								
African Immigrant *first*	5.25_a (*1.06*)	5.17_a (*1.27*)	5.00_a (*0.81*)	5.00_a (*0.81*)	4.61_a (*.96*)	5.00_a (*1.08*)	5.00_a (*1.32*)	5.06_a (*1.12*)
Intragroup Comparison								
Portuguese *first*	4.78_a (*1.09*)	4.44_a (*.73*)	4.46_a (*1.21*)	4.36_a (*1.29*)	4.73_a (*1.03*)	4.73_a (*.96*)	4.46_a (*.82*)	4.91_b (*1.04*)

Note: Means with different subscripts in the same row are significantly different at $p < .05$.

Results

A 2 (Target: Portuguese *vs.* African Immigrant) by 2 (Frame of Reference: intergroup *vs.* intragroup) by 2 (Disease: same *vs.* different) by 2 (Order Disease: heart failure disease *first vs.* heart failure disease *first*) mixed-design ANOVA with repeated measures on the first factor yielded a main effect of the target on the prioritization for heart transplant F (1, 88) = 6.78, p =.01, η_p^2 = .07, in that the African Immigrant (M =4.79, SE=.11) was less prioritized for heart transplant, than the Portuguese patient (M =4.84, SE=.11). The target effect was qualified by the presence of different diseases (*vs.* same disease), F (1, 88) = 3.91, p =.05, η_p^2 = .04, suggesting that participants make differential decisions only when presented with a vignette displaying different diseases. As

displayed in Figure 1, when presenting vignettes with the same disease participants with different vignettes, participants did not distinguish targets, F (1, 88) = .83, p = .37. In contrast, and has predicted, when systematically varying the diseases presented, African Immigrant (*vs.* Portuguese) was less likely to be prioritized, F (1, 88) = 3.84, p = .05, η_p^2 = .04. These results suggest that participants make more distinctions between targets when factors aside from race are presented.

The target effect was not qualified by frame of reference (intergroup *vs.* intragroup), F (1, 88) = .03, p =.86. Nevertheless, after an inspection of the means (see Table 2), we further look at the pairwise comparisons. The results show that the differences between African Immigrant and Portuguese patient are marginally significant in the intragroup frame of reference, when presenting participants medical cases with different diseases, F (1, 88) = 2.83, p = .10, η_p^2 = .03.

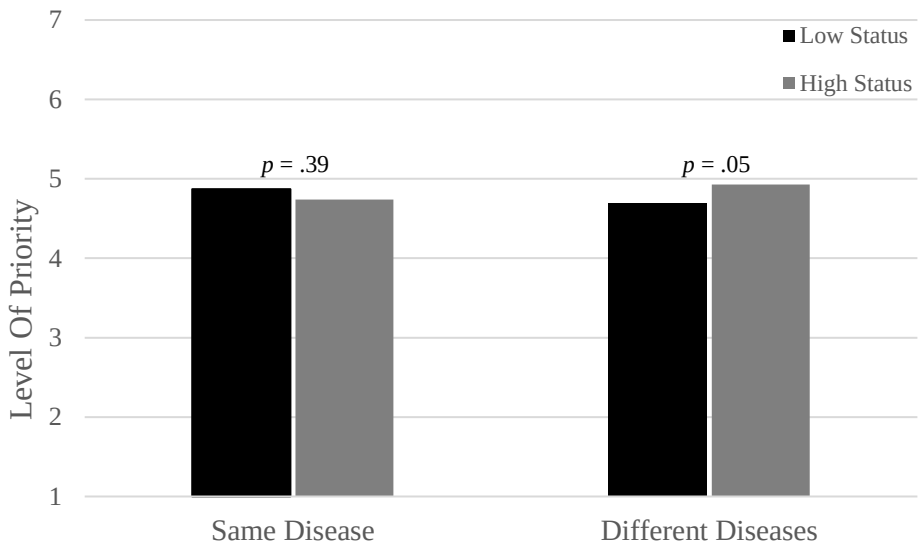

Figure 1. Level of priority for low and high status as a function of same (vs. different) disease

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Considering the complexity of the model and the relatively small sample, we did not expect the four-way interaction to be statistically significant. In this sense, in the next step of the analysis, we decomposed the design of the previous model. Specifically, we were interested in analyzing whether the effect of the target would be qualified by the frame of reference, in the condition in which the participants saw the clinical cases presenting patients with different diseases. To that

end, we decompose the design by analyzing separately the conditions of the *same disease vs. different diseases*.

Same Disease. A 2 (Target: Portuguese vs. Black Immigrant) by 2 (Frame of Reference: intergroup vs. intragroup) mixed-design ANOVA with repeated measures on the first factor. All main and interaction effects remain non-significant $F < 1$.

Different Diseases. A 2 Target (Portuguese *vs*. Black Immigrant) by 2 Frame of Reference (comparison: intergroup *vs*. intragroup) by 2 Order Disease (heart failure disease *first vs*. heart failure disease *second*) mixed-design ANOVA with repeated measures on the first factor was conducted yielding a different pattern of results. The analysis revealed a main effect for target: again, the African Immigrant patient (M=4.70; SE=.15) was significantly less prioritized than the Portuguese (M=4.93; SE=.14), F (1, 50) = 5.35, p =.03, η_p^2 = .10. No main effects were found for Order Disease, nor to Frame of Reference, F (1, 50) < .12, and F (1, 50) < .64, respectively.

As to interactions, Target × Order of Disease and Target × Frame of Reference were found non-significant, F (1, 50) < .10, and F (1, 50) < .01, respectively. But importantly, a triple interaction was found on the borderline of significance, $F_{\text{Target×Frame of Reference×Order Disease}}$ (1, 50) = 2.93, p =.09, η_p^2 = .06.

Looking at the multiple comparisons, the results show a pattern. The African immigrant patient systematically receives a lower priority each time the Portuguese patient is presented with heart failure disease. This bias in the prioritization for the transplant is higher in the condition where the Portuguese is presented *first*, F (1, 50), = 4.74 p = .03, η_p^2 = .09, than when presented *after* the African immigrant, F (1, 50), = 1.85 p = .18, η_p^2 = .04.

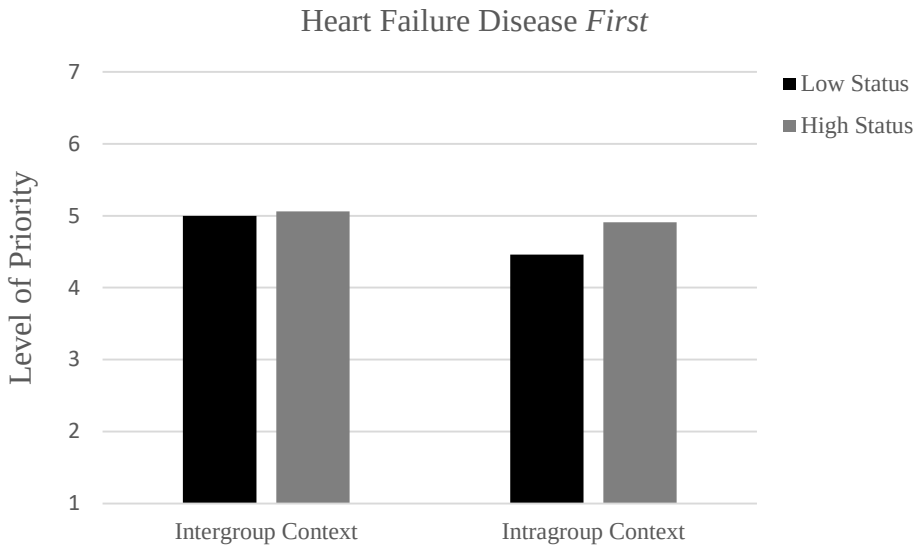

Figure 2. Level of Priority for low and high status as a function of group frame of reference, when heart failure disease is evaluated before.

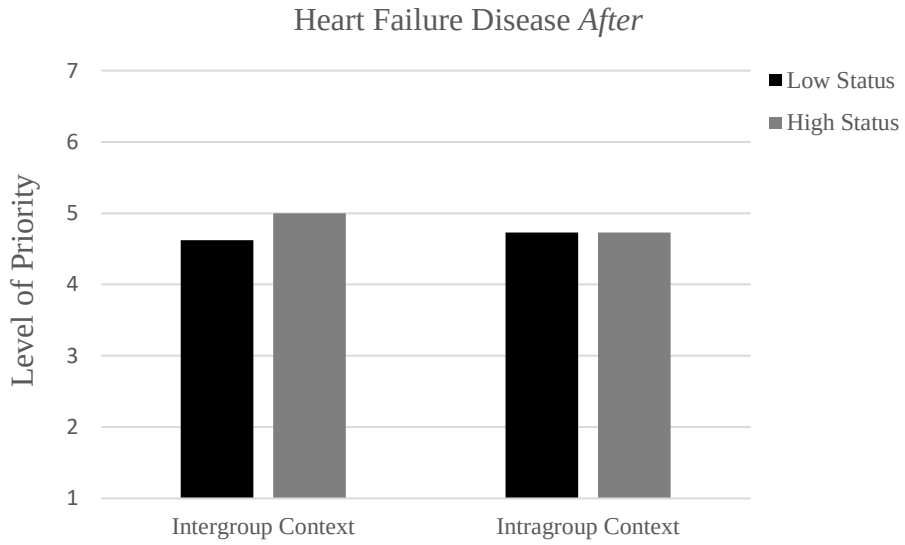

Figure 3. Level of Priority for low and high status as a function of group frame of reference, when heart failure disease is evaluated after.

Discussion

Study 1 was designed to assess whether patient characteristics (e.g. being African Immigrant *vs.* Portuguese) predict differentials in prioritization of patients in a waiting list for a

heart transplant and the conditions that could hypothetically induce target-based differentials in decision-making. Although the above presentation is complexified by the number of experimental factors involved in the experimental design, the results can be succinctly summarized.

Consistent with our first hypothesis, the African immigrant was significantly less prioritized for the transplant. This finding is in line with other studies documenting biases in medical decision making, particularly racial groups receiving less favorable medical outcomes (Bogart, Catz, Kelly, & Benotsch, 2001; Burgess et al., 2008; DiCaccavo, Fazal-Short, & Moss, 2000; Drwecki, 2001; Green et al, 2007; Ponterotto, Potere & Johansen, 2002; Sabin, Rivara, & Greenwald, 2008; Stepanikova, 2012; Schulman et al. 1999).

Consistent with our second hypothesis, when presenting the equally "qualified" patients, with the same disease, there were no differences between African immigrants and Portuguese patients. Importantly, and as predicted, when systematically presenting participants with different diseases, the African immigrant target (vs. Portuguese) was less likely to be prioritized for the medical procedure, suggesting that participants were more able to discriminate between targets when factors other than ethnicity were presented. In this sense, it is possible that a situation involving a higher complexity as for example, presenting medical cases with different diseases, has "allowed" individuals to discriminate between targets. These findings are consistent with previous work demonstrating that discriminatory decisions against a racial group are more likely to occur in situations where decisions makers have the opportunity to evaluate the candidates based on hypothetical factors other than their racial category (Dovidio & Gartner, 2000; Gartner & Dovidio, 2004).

Regarding our third hypothesis, the results failed to demonstrate that only the activation of a comparative intergroup context would increase racial bias in decision-making. Nevertheless, it is possible to observe several patterns. A first pattern that emerged shows that, in an intragroup context of comparison, presenting the patients with the same disease (and similar clinical symptoms) seems to produce a subtle compensation toward the African immigrant patient. The pattern is consistent with theoretical perspectives on mental correction suggesting that, in a deliberative intergroup decision-making situation, if people think about the hypothetical racial nature of the study and are able to correct for the bias, they may strategically modify their responses in a direction opposite to the perceived bias (Wegener & Petty, 1997; Wilson & Brekke, 1994).

A second pattern that emerged shows that presenting medical cases with different diseases predicted a more unfavorable outcome toward the African Immigrant, in both frames of reference (intergroup *vs.* intragroup). A third pattern showed that differential decisions were more likely to occur when the Portuguese patient was seen with a congestive heart failure medical condition. Every time the Portuguese patient was seen with congestive heart failure, the African Immigrant patient was evaluated less favorably, relative to the Portuguese. And this effect was independent of the salience of the frame of reference (intergroup *vs*. intragroup). In fact, it seems that the salience of the disease was more predictive of in-group favoritism than the comparative context where the decision took place.

Following a social identity approach, any differential outcome would be more likely to occur in a context where the intergroup comparison is salient (Bartsch & Judd, 1993). In other words, when the African immigrant is evaluated *before* the Portuguese target. This was the case in 1 out of the 4 conditions. Only in the intergroup comparison where the Portuguese patient was seen with a *heart failure* medical condition, was the African immigrant patient less often prioritized for the transplant. In the remaining 3 conditions, the salience of intergroup salience did not produce group-based distinctions. Conversely, when the Portuguese is evaluated *before* the African immigrant target, only in 1 out of 4 conditions is there a significant difference in the prioritization of both targets. Again, only when the Portuguese was seen with a heart failure medical condition, was the African immigrant patient less often prioritized for the transplant. One possible explanation has to do with the perceived severity of the disease. In particular, participants may have associated a higher degree of severity with congestive heart failure when compared to coronary heart failure. Thus, if congestive heart failure was associated with a higher degree of severity, then it should predict a higher prioritization, independently from the target's group membership. Such was not the case. Indeed, the potential alternative explanation of the higher severity of this specific disease is nullified by the absence of this same effect when it is the African immigrant patient having that disease. Thus, to further understand why was there a more unfavorable decision toward the African immigrant patient, when the Portuguese patient is evaluated with a specific disease (*congestive heart failure*), in the next sub-study (Study 1b) we look at whether prioritization of the African immigrant patient to a heart transplant would vary across levels of meritocracy support, controlling for group frame of reference (comparison: intergroup *vs*. intragroup). Particularly, we wondered whether meritocracy endorsers would less

often prioritize the African immigrant (*vs*. Portuguese target). And if so, is the unfavorable outcome given by meritocracy endorsers to the African immigrant explained by the intergroup nature of the comparative context?

Study 1b

Overview

While results from the first study elucidate us about the conditions under which decisions are less favorable to African immigrants, cued as low status targets and a member of an out-group, one potential explanation for differential decisions was missing. Pratto and collaborators (1999) suggested that the allocation of medical goods, such as heart transplant, is a byproduct of a social categorization process and ideological factors. Indeed, Skikta and Tetlock (1992) had already drawn attention to the fact that some situations call up certain social beliefs, and as proposed elsewhere, certain resource allocation issues may be informed by one's beliefs (Kerlinger, 1984; Sears, 1988). For example, Pratto and collaborators (1999) showed that priming ideological thinking (merit vs. need) might influence resource allocations, in such a way that participants in the merit condition favored meritorious recipient's more than did participants in the control condition, who favored the meritorious recipient more than did participants in the need condition.

Consistent with these findings, several studies have shown that meritocracy beliefs are important for group-based distinctions (Jost, Banaji, & Nosek, 2004; Jost & Hunyady, 2005; Major & Kaiser, 2017; McCoy & Major, 2007; Son Hing et al., 2011). So, in the light of this evidence, we reason that the relationship between patient social status and the decision of assigning priority would be dependent on the level of meritocracy endorsement. Particularly, this should be especially true when evaluating the low status (cued as an African immigrant) *before* the high status patient (cued as a Portuguese), that is, in an intergroup comparative context (Bartsch & Judd, 1993).

Based on these ideas, we propose that the belief in Meritocracy influence how people make decisions about resource allocation toward a patient with low status; and importantly, we propose that any differential outcome would be more likely to occur when the intergroup comparison is salient.

Thus, if evaluations of the low status target depend on the level of meritocracy endorsed, then we expect that the interactions between meritocracy and target status should be reliable. Second, if the evaluation of the target status depends on the frame of reference (intergroup context *vs.* intragroup context) then we expect an interaction between the frame of reference and target status. Third, if differential decisions between low and high status are dependent on the level of meritocracy endorsed, then this should only occur in an intergroup context; so we expect a three-way interaction between meritocracy, the frame of reference and target status.

Since study 1 had a small sample size and limited statistical power, we pooled information from two experiments to increase the statistical power of our predictions. The order of the target was systematically randomized and we hold constant the order of the disease, coronary heart disease *first* and congestive heart failure *second*. Pooling datasets across multiple sites is sensible, and how such decisions can or should be made is currently under debate (Zhou, 2017). Frequently, the analyses are sufficiently powered to evaluate the primary hypothesis of the study, however, often, interesting follow-up research questions, come up during the course of the project. This was the case. Following the results found in study 1, specific questions came up. Specifically, we wondered whether the potentially unfavorable outcome given by meritocracy endorsers to the African immigrant would be explained by the intergroup nature of the comparative context. Thus, the effort to answer the new question needed more statistical power to verify the predictions. Thus, supported by a statistical modeling analysis, we combine two samples gathered in the same way and the same set of variables. We do acknowledge that the ideal procedure would be a replication, with larger sample size, however, in the face of practical constrains (mainly logistic and financial) we pooled the datasets and conduct the analyses using a statistical procedure controlling the potential effects of the experiments (*see* analysis strategy section).

Method

Measures

Dependent variable. Using a 7-points rating scale, participants were asked to indicate the level of priority for heart transplant they would like to assign to each clinical case, from 1= low priority to 7 = high priority.

Descriptive Meritocracy. Descriptive Meritocracy was measured using the Perceptions of Meritocracy Inventory (PMI; Garcia, Desmarais, Branscombe, & Gee, 2006). The PMI assesses beliefs that societal rewards are allocated on the basis of individual merit (Study 1a, alpha = .74; Study 1b, alpha = .83). This 24-item scale includes items such as 'People's wages depend on how well they do their jobs', 'Success is possible for anyone who is willing to work hard enough', 'Individuals are responsible for their own financial success', and 'Effort is the largest component of success' (1 = strongly disagree to 7 = strongly agree), with high scores indicating strong endorsement of meritocracy.

Participants. A total of 123 participants (74% Female; M= 25.36 years, DP= 7.55) were pooled from two experiments where the same procedure was replicated. Participants received a monetary reimbursement (e.g. voucher) in exchange for their participation in the research. The procedure in both experiments was the same as in study 1a. Each participant received a condition varying the frame of reference (context: intragroup *vs*.intergroup) and had to assign a priority level to two patients who were in a waiting list. The (fictitious) patients varied in their country of origin: Cape-Verde and Portugal. Other than that, they were similar in age, family status, and place of residence (Lisbon).

Design. The general design is a 2 × 2 factorial design with one factor between subjects and one within. The between factor manipulated the group frame of reference and included which target was evaluated first. If the low status is evaluated *before*, that represents an intergroup comparison, because it activates an intergroup context; if the low status is evaluated *after*, that represents an intragroup comparison, because it activates an interpersonal context. The within factor is the social status of the target (high *vs*. low). So, for participants who evaluated the high status first, we call it intragroup context; for participants who evaluated the low status first, we label it intergroup context. The first disease evaluated was always coronary heart medical disease and the second disease systematically evaluated was heart failure disease.

Procedure. After completing the fictitious first study – the decision-making experiment - participants proceeded on to the second study where descriptive meritocracy was assessed. At the end of the survey, participants completed the target status manipulation check and demographic

questions. Randomization was set with a total of 2 randomized blocks. Table 1 lays out both the experimental design and the number of participants per cell in each experimental condition.

Table 1. Distribution of subjects per experimental condition.

		Number of subjects per experimental condition		
	First Target Evaluated	Experiment 1a	Experiment 1b	Total
Frame of Reference (vary across subj)				
Intragroup Comparison	High Status	15	45	60
Intergroup Comparison	Low Status	13	50	63
Order of Disease (fixed across subjects)				
CHD *before* CHF disease	Total	28	95	123

Note. CHD = Coronary heart disease; CHF = Congestive heart failure.

Analysis Strategy

To accomplish this, we merged two datasets of two experiments where subjects prioritized the low status patient either before or after prioritizing the high status patient. In both experiments, all participants evaluated congestive heart failure disease after coronary disease. In other words, the frame of reference varied across participants and order of presentation of disease was held constant through conditions. The purpose of this merger was to increase the power of specific predictions and use data-merge methods that allow analysing the pooled data after controlling for contextual (e.g. experiment) bias.

We used a linear mixed model specific for dyadic data equivalent to a random-effects analysis of covariance, where the target status is the factor and the higher level explanatory variables are the covariates (Kenny, Kashy, & Cook, 2006). Statistically, each participant is a dyad, composed of two scores – a priority for the low status and the high status target. Thus, each

dyad has two scores on Y. The level-1 predictor variable is the target status, the level-2 predictor variable is the participant;the level-3 predictor variable is the experimental condition, the frame of reference (context: intergroup *vs.* intragroup); and the level-4 predictor variable is the experiment (experiment 1 *vs*. experiment 1b).

Because there are only two observations at level 1, there is not much variation on the slopes from participant to participant. Thus, coefficients from the first stage of analysis must be constrained to be equal across all participants. In other words, the model will contain all the fixed effects for the predictors and interactions and two random effects (variation in the intercepts and error variance) across model estimation. This does not bias the results, because variation is properly included in the error variance (*see* Kenny, Kashy, & Cook, 2006)

First, we examined whether prioritization of patients would be different as a function of the participant (*intercept-only model*). Then we examined whether low status would be less prioritized relative to the high status, and estimated whether hypothetically status-based distinctions in prioritization would vary between levels of meritocracy. Afterward, we examined to what extent status-based distinctions in prioritization would vary across experimental conditions for highly meritocratic participants. And finally, in the third model, we estimate to what extent the effect of the experimental condition and meritocracy in the prioritization of low and high status patients would vary across experiments.

Results

Results from the random effects analysis of covariance can be seen in Table 2. The intercept for prioritization indicates that the average estimate of the likelihood of prioritizing both patients is 4.79 is a scale ranging from 1 to 7 points. Model 1 shows that the main effect of target status was significant, b=.40, t (294) = 4.62, $p < .001$, indicating that high status target is significantly more prioritized relative to the low status. More exactly, this coefficient estimates that with each 1-unit increase in target status, the likelihood of prioritizing the high status increased by .40. The remaining main effects were non-significant.

Regarding interaction effects, the interaction between target status and meritocracy is non-significant, b =.08, t (294) = .54, $p < ns$, indicating that status-based distinctions in prioritization do not vary between levels of meritocracy. However, the interaction between target status and frame of reference is significant, b =-.51, t (294) = -4.09, p < .001. Given the coding scheme used, the interaction suggests that status-based distinctions in prioritization do vary between low and high status target when presented within the intergroup context b = .57, t (148) = 4.90, p < .001, but not when presented within the intragroup context b =.05, t (132) =.60, $p <$ *ns*.

Lastly, in model 2 was estimated to what extent the effect of the experimental condition and meritocracy in the prioritization of low and high status patients would vary across experiments. The results suggest that, when controlling for the effect of the experiment, the previous triple interaction coefficient remains marginally significant, b = - .64, t (294) = -1.87, p = .06.

Table 2. A multilevel model of patients' prioritization for a heart transplant.

	Model 0			Model 1			Model 2		
	b	SE	CI	b	SE	CI	b	SE	CI
Intercept	.56***	.10	.39;.80	.59***	.10	.42;.83	.66***	.11	.48;.90
Error	.58***	.07	.46;.73	.51***	.06	.41;.63	.43***	.05	.34;.54
Individual Level									
Target Status				**.40*** **	.08	.22;.54	**.32*** **	.08	.16;.47
Group Level									
Meritocracy				.04	.16	-28;.36	.09	.18	-.26;.44
Frame of Reference				-.01	.02	-.04;.02	-.15	.16	-.47;.16
Experiment							.09	.16	-.22;41
Target Status × Meritocracy							-.02	.17	-.36;.32
Target Status × Frame of Reference							**-.51****	.16	-.83; -.20
Target Status × Meritocracy × Frame of Reference							**-.64†**	.35	-1.34;.06
Target Status × Meritocracy × Frame of Reference × Experiment							-.50	.71	-1.9;.90
	848.032			827.39			809.301		
R^2				-.04			.06		
Number of Parameters	3			6			18		
Fixed	1			4			16		
Random	1			1			1		

Code: Target Status, 1= Low Status; 2= High Status. Frame of Reference, -.5= intergroup Context; .5= Intragroup Context. Experiment, -5= Experient 1; 5 = Experiment 1b. $^{***}p < .001$; $^{**}p < .01$; $^{\dagger}p < .10$

In the next step, we broke down the triple interaction. We started by examining the effect of the target status, moderated by the frame of reference, at each level of Meritocracy. Since the Target Status by Frame of Reference was significant, we examine to which degree status-based distinctions in priority would vary as a function of frame of reference for highly meritocratic participants and for low meritocratic participants. Thus, we calculated the simple slopes for the effect of frame of reference at the one standard deviation below the mean and at one standard deviation above the mean of Meritocracy endorsement.

In the intergroup context, the results indicated that meritocracy rejecters and meritocracy endorsers prioritized the high status patient (M = 5.00, SE = .18) over the low status patient (M = 4.49, SE = .18), b = .52, SE = .16, p = .001; IC95%: .21; .84. Thus, meritocracy endorsers and rejecters do not significantly vary to predict differential decisions between low and high status targets. Nevertheless, it's possible to observe that the effect of the target status is higher among highly meritocratic individuals b = -.82, SE = .14, p < .001; IC95%: -1.09; -.53, relative to low meritocratic individuals b = -.52, SE = .16, p = .001; IC95%: -.84; -.21.

When we look at the other frame of reference - the intragroup context - the coefficient for the main effect of target status is non-significant, at each level of Meritocracy. For meritocracy rejecters, target status b = -.14, SE = .15, p < *ns*. For meritocracy endorsers, b = - .09, SE= .17, p < *ns*. In sum, when high status member is presented first, there is no variability in the effect of the target status, nor in the conditional effect of meritocracy.

Nevertheless, another way of looking into the interaction is by examining the effect of frame of reference, moderated by target status, at each level of Meritocracy (Low: -.46DP; High: + .46 DP). The interpretation of the triple interaction is clearer when we break down the model in this fashion, showing that intergroup context influences meritocracy endorsers when the patient is a high status target, b = .73, SE = .25, p = .003; IC95%: .25; 1.22 (see Table 3). As can be seen in the Figure 1, meritocracy endorsers significantly prioritize more the high status target when in an intergroup context, than when in an intragroup context.

Table 3. Prioritization of patients for a heart transplant, as a function of frame of reference and target status at each level of Meritocracy

	b	*SE*	*F*	*p*
-1 SD Meritocracy				
Low Status				
Frame of Reference	-.21	.25	.77	.38
High Status				
Frame of Reference	.16	.25	4.2	.52
+1 SD Meritocracy				
Low Status				
Frame of Reference	-.17	.25	.48	.49
High Status				
Frame of Reference	.73	.25	8.93	< . 01

Contrast Codes for Target Status, Low Status = -.5, High Status = .5

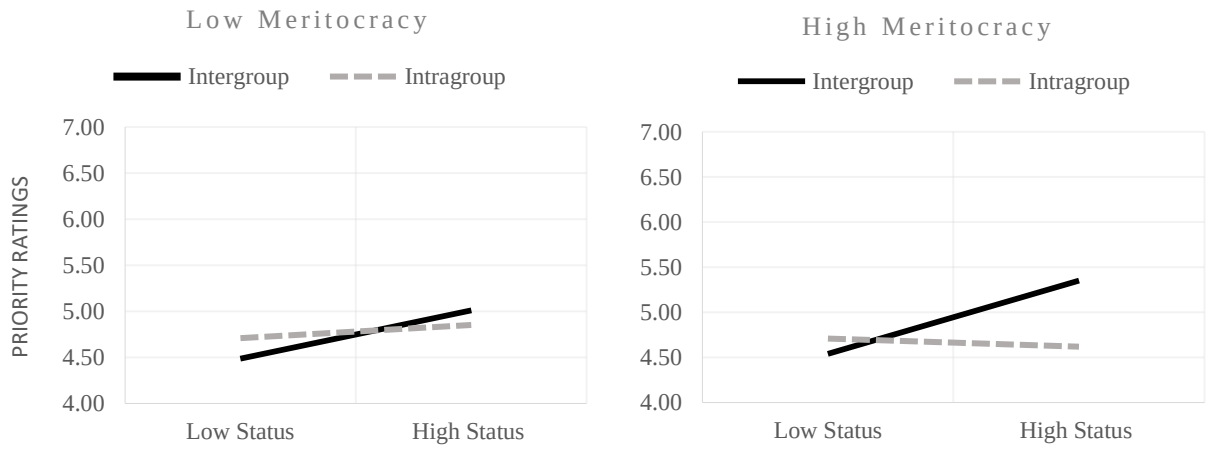

Figure 1. Prioritization of patients for a heart transplant, as a function of frame of reference and target status at each level of Meritocracy beliefs.

Discussion

Study 1b was designed to assess whether higher support for meritocracy would predict target status-based differentials on priority scores when an intergroup comparison was salient.

Consistent with our hypotheses, participants distinguished between low and high status patients: the level of recommendation for transplant was higher for the high status, relative to the low status patient. We expected three interaction effects: target status × meritocracy; target status × frame of reference; target status × meritocracy × frame of reference. Although target status × meritocracy interaction did not reach statistical significance, target status × frame of reference was significant, suggesting that when the intergroup comparison is salient, the low status patient (and an out-group member) is significantly less recommended to receive a heart transplant than the high status patient (in-group patient). It's possible that when intergroup comparisons were made salient, the low status target, because is also an out-group member was more likely to be perceived as homogeneous (e.g. Lorenzi-Cioldi, 1993) and stereotypical inferences were more likely to occur, resulting in a less favorable outcome. The higher-order effect was marginally significant, suggesting that differential decisions between low and high status vary across the level of meritocracy and as a function of how the group comparison is framed to participants. In the intergroup context, where an intergroup social comparison is more salient, the likelihood of meritocracy endorsers prioritizing the high status patient (*vs.* low status) is higher than the likelihood of meritocracy rejecters prioritizing the high status patient. So the distinction between high and low meritocracy individuals lies more on the degree to which they prioritize the high status group member than to the degree they do not favor the high status group member. In other words, both meritocracy endorsers and rejecters tend to prioritize the high status over the low status. However, the degree to which meritocracy endorsers prioritize the high status is higher than the degree to which meritocracy rejecters prioritize the high status (*vs.* low status). Indeed, previous work has demonstrated that greater endorsement of meritocracy beliefs predicts a range of attitudinal and behavioral intergroup outcomes (e.g., Castilla & Bernard, 2010; Biernat, Vescio, & Theno, 1996; Fraser & Kick, 2000; Haney & Hurtado, 1994; Ho et al., 2002; Katz & Hass, 1988; McCoy & Major, 2007). Of particular interest in the present work is research evidence suggesting a significant relationship between meritocracy beliefs and in-group favoritism (Fraser

& Kick, 2000; Haney & Hurtado, 1994; Jost, 2001). Thus, the results from study 1b offer preliminary evidence on the role of meritocracy beliefs in predicting status-based variations in medical procedures.

In contrast, and as anticipated, in the intragroup comparison, where participants evaluated a Portuguese patient first, there are no significant differences in the level of priority assigned to the first patient and to the second patient evaluated. In other words, the score given to the Portuguese patient will be likely the same given to the African Immigrant patient.

To sum up, this set of results allows us to understand how individuals operate when decision-making about medical goods to patients that vary in their social status. Particularly, it has allowed us to understand the conditions under which low status is more likely to receive an unfavorable outcome. When the high status is evaluated *after* the low status of the (intergroup frame of reference), there is an overall tendency to assign a higher priority to the high status. And this higher priority given to the high status patient is slightly higher for meritocracy endorsers (*vs.* rejecters).

The statistical procedure may be of concern because, according to the current guidelines promoting transparency, openness, and reproducibility in experimental social psychology, the most appropriate way to test our predictions would be a replication of the experiment with a larger sample, thus increasing predictive power. The statistical procedure gives us confidence in the results achieved, however in accordance with current scientific standards (Klein et al., 2018; Nosek, et al., 2015; Open Science Collaboration, 2015), a replication will give greater empirical support to the results demonstrated.

Overall, the results are consistent with the idea that the relationship between meritocratic beliefs and outcomes toward low status groups is based on the idea of distinctions between social groups; and in this study, such distinctions are more likely to emerge in an intergroup comparison frame of reference.

So, in the next step of the research, we addressed three important issues. The first one has to do with the salience of *heart failure* disease. Because salience of *heart failure* disease predicted high status favoritism, in the following study we pre-tested six medical conditions, ruling out a potential limitation regarding the equivalence of diseases at the level of perceived severity. Secondly, because the manipulation of intergroup comparison has shown to be important for the

low status prioritization, in the following studies, we hold constant the intergroup comparative context, adding four filler medical cases to decrease the awareness of the racial nature of the study.

Finally, we find initial support for the idea that medical decisions are more likely to be unfavorable toward the low status target, at least under certain circumstances, and this is partially explained by meritocracy, in that, the more meritocracy beliefs are endorsed, the strongest is the recommendation of the high status patient for the heart transplant. As such, in the following study, Meritocracy beliefs will be manipulated.

Chapter III

The salience of meritocracy beliefs on
medical decisions toward low status targets

Study 2

Overview

Meritocracy as a social norm promotes a hierarchical social system (Sidanius & Pratto, 1999), based on individual merit, and facilitates the emergence of negative attitudes and greater tolerance toward discrimination of socially devalued groups (Katz & Hass, 1988). For example, after being exposed to meritocracy beliefs, participants showed stronger implicit negative attitudes toward immigrants, and inferred greater negative internal attributions about racial groups, compared to the control group (Costa-Lopes et al., 2017; Ho et al., 2002). A similar adverse effect was found in organizational contexts where the salience of meritocracy facilitated a greater expression of discriminatory behaviors toward low status targets (McCoy & Major, 2007; Pereira et al, 2009, Castilla & Bernard, 2010).

Thus we extend the previous research by examining whether the salience of meritocracy predicts medical decisions toward low status group members. In particular we hypothesized that when meritocracy beliefs are salient, the low status target would receive a less favorable outcome, relative to the high status target. We propose that if Meritocracy beliefs operate as a facilitator of intolerance toward low status groups, by rendering access to attributional, stereotypical and negative inferences (Biernat et al., 1998), then low status target should receive a less favorable result, particularly in situations that activate negative inferences, as for example inferences about disease causal internality. For example, evidence shows that when causal attributions are added to the picture, it serves to accredit the target with more or less responsibility (Pansu, Breassoux, & Louche, 2003). In fact, multiple studies highlight the importance of such attributions when forming opinions about allocation of social goods (e.g., Peterson, Bang, Sznycern, Cosmides & Tooby, 2012; Skikta & Tetlock, 1993)

In parallel, researchers in the health care domain have shown the importance of internal causality, emphasizing that the way people think about others in need may be dependent on how the issue is framed (Gollust & Lynch, 2011; Ubel et al., 2001). For example, there is research showing that when an illness is portrayed as a general outcome, the responsibility for inequalities in treatment is assigned to society-at-large. But, when portraying an illness as a particular instance

of a person lifestyle, such as smoking, drug and/or alcohol misuse, that perception of responsibility may move toward the individual (Krütli, Rosemann, Törnblom, & Smieszek, 2016). Moreover, research has shown a social preference for allocating medical care to patients who are deemed not responsible for their disease over those who are deemed personally responsible (e.g. Furnham, Ariffin, & McClelland, 2007; Ubel et al., 2001; Wittenberg, Goldie, Fischhoff, & Graham, 2003; Fowler, Berwick, Roman, & Massagli, 1994; Stanton, 1999). For example, Stanton (1999) shows that the general public tends to agree that personal morality and responsibility for illness should influence how society allocates scarce life-saving technology. A similar result was found in other studies in health care decisions, where laypeople gave lower priority to clinical services directed at patients who were in some sense responsible for their illness (Fowler et al., 1994). Thus we have a good reason to suspect that framing illness attributions can be invoked to influence people's decision on whom to assign priority for a scarce medical good, such as heart transplant.

So the question is, do people differently assign transplant recipients as a function of causal attributions? And if so, does meritocracy, particularly through the work of internal control component associated with personal responsibility, influence the evaluation about who deserves to be prioritized? Research suggests when resources are perceived as limited, people engage in cognitive mechanisms about why claimants need help. From this initial analysis, if individuals have potentially informative cues on the degree of responsibility of the person for their state, they are likely to infer on the degree of deserving (Skikta & Tetlock, 1993). Beyond these cognitive mechanisms, at the roots of resources allocation are also sociopolitical ideologies (Pratto et al., 1999). Accordingly, the cognitive mechanisms that sustain the allocation of resources comply with social ideologies, embedded in the cultural context (Pratto et al., 1999). Specifically, ideologies with an egalitarian or meritorious basis. Both coexist within the social context, and when the salience of one increases relative to the other it is more likely that the people use it to infer merit and thus prioritize those who most deserve it. Because when Meritocracy beliefs are salient, individuals are more likely to process information about the individual responsibility for the adverse situation (Bahamondes, Sibley, & Osborne, 2019; Jost, Wakslak, & Tyler, 2008), then it is likely to operate as a facilitator of deservingness heuristics in medical decision-making.

Thus, we combine our theoretical proposal with theorizing on framing illness causal attributions and resource allocation models (Pratto et al., 1999; Skikta & Tetlock, 1992) by proposing that Meritocracy as a hierarchy-based ideology (Major & Kaiser, 2017) influences how

people allocate intergroup decisions, particularly when framing the cause of the illness in a way that one can infer patient's personal responsibility for being in that state of health.

In a health care context, a merit-based criterion can be the lifestyle choices of people whose poor health is related to those choices (Cappelen & Norheim, 2005). An implication is that patients who are perceived as more responsible for their own illness may be more likely to receive a lower priority for treatment. If meritocracy as a system-justifying belief places the onus of responsibility for a person's life outcomes in the person rather than on structural forces (e.g. discrimination) (McCoy & Major, 2007), it is possible that, when evaluating a patient with a lower status, he may be seen as more responsible for his lifestyle choices, and thus more penalized, when recommended for treatment. Accordingly, when framing a person as highly responsible for his/her illness, participants should express higher status-based distinctions in priority ratings. Specifically, low status patients should be seen as more responsible for the illness condition and therefore, less likely to be recommended for a heart transplant, than the high status target. In contrast, when framing a low responsibility disease, such as a genetic-based disease, Meritocracy should not lead to status-based differentials. Therefore, in a low responsibility disease condition, we expect the low status patient to be equally prioritized for transplant as the high status patient.

Thus, in Study 2, we conducted an experiment that manipulated the salience of meritocracy (salient *vs.* neutral) and the salience of the cause of the disease (low responsibility *vs.* high responsibility). To identify a priming task that would successfully activate meritocracy beliefs, a pilot test was conducted prior to the main study. Additionally, a pilot study was conducted with the purpose of identifying two heart diseases that were similar severity-wise, but different in the individual responsibility of the patient. Thus, next we present the results from the two pilot studies, and then the main study will be presented.

Pilot Study: Activation of Meritocracy

Since the attempts for activation of meritocracy found in the literature ranged from asking directly to participants their level of agreement toward Meritocracy (e.g., Chatard et al., 2006) to present explicit (e.g., Quinn & Crocker, 1999) or implicit (e.g., McCoy & Major, 2007) priming

tasks, we conducted a pilot test aiming to (a) ascertain whether priming beliefs relevant to meritocracy via cognitive tasks would temporarily increase meritocracy endorsement, when compared with a neutral condition; and (b) ascertain which type of priming (implicit *vs.* explicit) is more likely to temporarily increase meritocracy endorsement.

Method

Participants. A total of 60 participants (68.3% Female; M= 24.98 years, DP= 5.49) participated in the pilot test. Participants received no monetary reimbursement in exchange for their participation in the research.

Procedure. In this pilot study, the participants were exposed to one of four conditions. In each condition, the meritocracy salience occurred via the execution of tasks, which differed in form and type of priming (implicit *vs.* explicit) (see Appendix B for details). In one condition (a) the participants read a text with meritocratic content and were later asked to choose, among a set of sentences, the statement that best summarized the central idea of the text (adapted from Pereira, Vala & Leyens, 2009) - comprehension task ; (b) in another condition, the task was to pair each sentence with the respective percentage - pairing task; (c) in a third condition, the participants had the task of unscrambling sentences (adapted from McCoy & Major, 2007) - unscrambling task ; (d) the fourth condition was a control condition. As mentioned above, priming varied in degree of explicitness, with comprehension task being the most explicit experimental condition and unscrambling task the least explicit condition.

Measure

Descriptive Meritocracy. We measured descriptive meritocracy using the same scale used in study 1b (Garcia, Desmarais, Branscombe, & Gee, 2006).

Results

Overall, the results show no significant differences between type of priming task, F (3, 55) = .96, p =.42, η_p^2 = .75). We conducted single-degree-of-freedom contrasts to test differences between the three types of tasks. Specifically, the contrast test shows that the mean of pairing task and comprehension task does not differ significantly from the unscrambling task t (58) = -.33, p = .74. Pairing task does not differ significantly from the comprehension task condition t (58) = -.02, p =. 98. And comprehension task does not differ significantly from the unscrambling task condition t (58) = .27, p =.79. Additionally, means of the three experimental conditions differ marginally from the control condition t (58) = 1.66, p = .10, suggesting among meritocracy priming tasks a greater tendency to endorse meritocracy beliefs, compared to the control condition.

An inspection of the means shows that, on average, participants in the unscrambling task condition, score slightly higher (M= 4.57, SD= .86) than participants in comprehension task condition (M= 4.48, SD= .90), than participants in pairing task condition (M= 4.47, SD= .61), than participants in the control condition (M= 4.05, SD= 1.07). Despite the fact that the mean of the unscrambling task does not differ significantly from the control condition task t (58) = 1.56, p = .13**,** it represents the highest mean difference between conditions (*mean difference* = .50), therefore we used the unscrambling sentence task to activate the salience of meritocracy beliefs in the main study.

Pilot Study: Similarity of Heart Disease

Because the equivalence of diseases at the level of perceived severity was not pre-tested in study 1a and 1b, we conducted a pilot study to select two heart diseases similar severity-wise, but different in the attribution of patient individual responsibility.

Method

Participants. A total of 91 participants (75% Female; M = 36.15 years, DP = 7.84) participated in the pilot test. Participants received no monetary reimbursement in exchange for their participation in the research.

Procedure. The participants were invited to participate in an online study about the perception of the degree of severity of certain heart diseases with the purpose of analyzing the materials to be used in a subsequent study. Thus, in each disease, its definition was presented, as well as the associated causes and symptoms. Participants were asked to assess a total of six diseases with respect to the degree of severity of the disease and patient responsibility for the acquisition of the disease. (*see* Appendix B for details).

Measures

Severity. Participants indicated in a Likert-type scale ranging from 1 (*not severe*) to 7 (*very severe*) the degree of severity of the disease.

Individual Responsibility. In terms of individual responsibility, participants indicated the extent to which a person with the disease is responsible for his or her state of health in a scale ranging from 1 (*not responsible)* to 7 (*very responsible*).

Results

The pairwise comparison of means revealed one pair – dilated cardiomyopathy and congenital heart disease – shows no significant differences as to the perceived degree of severity *t*

(91) = -.01 p = .92, but revealed statistically significant differences as to the degree of perceived individual responsibility. While congenital heart disease was perceived as low in individual responsibility (M=2.49, SD=1.81), t (91) = - 8.02, p = .000, dilated cardiomyopathy was perceived as high in individual responsibility (M=5.28, SD=1.42), t (91) = 10.77, p = .000.

Thus, *congenital heart disease* and *dilated cardiomyopathy* were selected to incorporate the manipulation of personal responsibility. Dilated cardiomyopathy will represent the high responsibility and congenital heart disease will represent the low responsibility disease.

Main Study

Method

Participants. A total of 78 participants were invited through a server list to participate in a social psychology experiment in the Lab, in exchange for a 5 € gift card. Data from 8 participants were removed due to outliers and 2 participants because of dual citizenship (Portuguese and other). Final sample comprised 68 participants (77.9% female, Age: M = 23.91, SD = 5.16).

The study employed a two-study ruse. Participants were told they were taking part in two separate studies, one on 'Cognitive Performance' and one on 'Decision-Making Processes'. The "first study" served as our manipulation of Meritocracy, and we used a scrambled sentence task, previously pilot tested and adapted from McCoy and Major (2007). Participants were randomly assigned to one of the two conditions, the meritocracy condition or the control condition. In both conditions, participants were given 18 items consisting of five words and told to construct four-word sentences. Participants had five minutes to complete as many of the items as possible. In the meritocracy condition, participants completed sentences related to meritocracy beliefs (e.g., Item: 'effort positive prosperity leads to' Answer: 'Effort leads to prosperity'). In the control condition, participants completed sentences unrelated to meritocracy (e.g., Item: 'experience travel is an learning' Answer: 'learning is an experience'). Participants then proceeded to the "Decision

Making Processes" study, where they were asked to imagine themselves as being invited to be part of an evaluation panel, with the mission of assigning priority to patients, who are already on the waiting list for a heart transplant. They were then asked to evaluate the clinical cases of six patients on the waiting list and asked about their opinion regarding the level of priority to be assigned to each patient. Clinical cases were presented in the same order. Clinical cases 1, 2, 4 and 5 were filler cases aiming to decrease the awareness about the racial nature of the study. Clinical cases 3 and 6 represent the critical cases, where case 3 represents the low status patient and case 6 represents the high status patient. Afterward, participants completed a section of scale measures assessment, (e.g., descriptive meritocracy beliefs), sociodemographic items, and were briefly debriefed.

Measures

Dependent Variable. Our primary dependent variable is level of priority which was measured used a 7-points rating scale, rating from low priority (1) to high priority (7), based on the patient file and the rating criteria provided.

Endorsement of meritocracy. We measured descriptive meritocracy using the same scale used in study 1b (Garcia, Desmarais, Branscombe, & Gee, 2006). The 10-items were averaged into a composite score (alpha =.88).

Results

Preliminary Analysis

Table 1. Descriptive statistics and intercorrelations for study sample

Variable	M	SD	2	3	4	5
1. Priority for High Status	4.76	1.08	**.54****	.061	-.13	.10
2. Priority for Low Status	4.85	1.12		-.06	-.09	**.39****
3. Prime: Meritocracy					-.05	-.07

4. Prime: Responsibility			-.06
5. Descriptive Meritocracy	4.42	0.95	

As shown in Table 1 the level of priority for the high status target is positively and strongly associated with the level of priority for the low status target $r(68)=-.54$, $p = .001$. The endorsement of meritocracy is positively related to the level of priority assigned for the low status target $r(68)=-.39$, $p = .001$, but unrelated with the level of priority assigned for the high status target $r(68)=.10$, $p = .41$, suggesting that a higher prioritization of the low status patient is moderately associated with highly meritocratic individuals. Gender is not associated with the level of priority assigned for the high status target $r(68)=.02$, $p=.90$, nor for the low status target $r(68)=.03$, $p=.84$.

Manipulation Check. In order to check the level of meritocracy endorsement, we tested whether participants in the meritocracy prime endorsed meritocracy beliefs to a greater extent than in the neutral condition. The results revealed no differences in the level of meritocracy endorsed, F (1, 66) = .35, p =.56, η_p^2 =.005. The results suggest that the priming did not significantly increase the level of endorsement with meritocracy beliefs[6].

Main analysis

A 2 (Prime: meritocracy *vs.* control) by 2 (Target Status: high *vs*. low) by 2 (responsibility: low *vs*. high) mixed-design ANOVA with repeated measures on the second factor yielded a triple interaction effect of prime, target status and responsibility on priority assigned, F (1, 66) = 4.171, p =.045, η_p^2 = .061. All main effects remained non-significant $F < 1$.

Follow-up contrast tests confirmed that participants who had previously been primed with meritocracy, recommended the target differently, as a function of framing personal responsibility for the illness. That is, when presented with high personal responsibility, meritocracy-primed participants were significantly more likely to assign a higher priority to the low status target

[6] These might happened for a number of reasons. Unlike McCoy & Major (2007) we do not measure the degree of agreement with meritocracy immediately after priming. Meritocracy was measured at the end, after the decision-making paradigm, and before the sociodemographic section. This difference may explain the results described above. Another alternative explanation lays in the nature of the manipulation check. We will discuss this question in more detail in Chapter IV.

(M=5.29; DP=0.31), than to the high status (M=4.82; DP=0.28). Conversely, participants in the control condition were more likely to assign a higher priority to high status (M=4.95; DP=0.28), than low status (M=4.65; DP=0.26), F (1, 35) = 4.723, p =.037, η_p^2 = .119. When framed with low responsibility, exposure to meritocracy did not predict differences between low and high status targets F (1, 29) = .552, p =.46, η_p^2 = .019 (*see* Figure 1).

To sum up, these results suggest that framing personal responsibility, that is, perceiving a low or high responsibility personal over the illness predicted the different pattern of low status' prioritization responses as a function of the salience of Meritocracy. Especially, and as visually depicted in Figure 1, priming personal responsibility had a significant variation toward the low status target when interacting with the meritocracy prime. While in the low personal responsibility condition, the low status patient is as much prioritized as the high status patient, in the high personal responsibility condition, the low status patient is more likely to receive a higher prioritization than the high status, particularly among merit-primed participants. These results serve as a support for our next assumption. If the type of perceived responsibility for the disease serves as a cue for favoring the most deserving recipient, perceiving a heart transplant recipient as having high personal responsibility for the disease should have a stronger influence in the prioritization, than in the low personal responsibility frame, particularly when meritocracy is salient. If this happens to be true, the impact of meritocracy on status-based differentials should be stronger when the recipients are portrayed with the disease representing a high responsibility.

Pairwise comparisons supported our predictions. Status-based differentials were marginally significant among primed participants, in the condition where heart transplant recipients were portrayed with the disease representing a high responsibility, F (1, 35) = 3.26, p =.08, η_p^2 = .09. Specifically, the low status patient was more likely to receive a higher prioritization than the high status. In the remaining three conditions, status-based differentials were non-significant[7].

[7]Status-based differentials in the neutral condition, F (1, 29) = 1.07, p =.31, η_p^2 = .04, and in the Meritocracy condition F (1, 29) = 0.00, p = 1.00, at the low responsibility condition. Status-based differentials in the neutral condition, F (1, 35) = 1.56, p =.22, η_p^2 = .04, at the high responsibility condition.

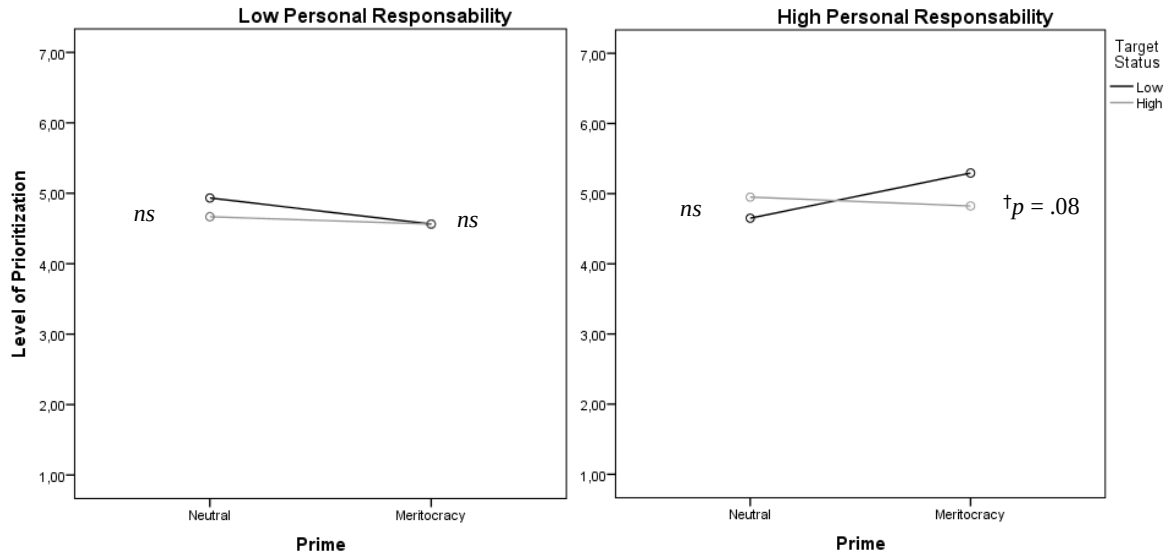

Figure 1. Prioritization of patients for a heart transplant, as a function of Meritocracy salience and Target Status at each level of Personal Responsibility.

We further analyzed whether the predicted interaction (prime × responsibility) would be stronger in the decision making toward the low status patient. To test this assumption, analyses were conducted for low status target and high status target separately.

Low Target Status. A 2 (Prime: meritocracy *vs.* control) by 2 (responsibility: low *vs*. high) univariate ANOVA factor yielded a interaction effect of prime × disease on prioritization, F (1, 68) = 3.51, p =.07, η_p^2 = .052. As to main effects , all remained non-significant F < 1. Nevertheless, descriptives show that patients in the low responsibility frame tended to be, on average, less recommended for transplant (M=4.75, DP=.20), relative to the high responsibility frame (M=4.97; DP=.18); and recommendation for transplant, on average, tended to be higher among merit-primed participants (M=4.92; DP=.19) relative to those on the control condition (M=4.78; DP=.19)
Follow-up tests show that when meritocracy is made salient, aversive responses to low status patients are significantly higher in the low responsibility frame (M=4.56 DP= .97), than in the high responsibility frame (M= 5.30, DP= 1.05), t (31) =-2.09, p =.05. Additionally, aversive responses to low status patients in the low responsibility frame tended to be higher when meritocracy is salient (M= 4.57, DP=.96), when compared to the control condition (M= 4.93, DP=.76). However the difference did not reach statistical significance, t (31) =1.17, p =.26.

High Target Status. The same analysis was run for the high status patient. The univariate ANOVA yielded no main effect of Prime $F < .1$, or Disease $F = .1$, nor interaction effects $F < .01$. As previously, descriptives show that in the low responsibility frame recipients tended to be, on average, less recommended for transplant (M=4.62, DP=.20), relative to the high responsibility frame (M=4.89; DP=.18). As anticipated, the salience of meritocracy or responsibility frame is far from significant in decision making toward the high target. As confirmed by follow up tests, meritocracy did not impact on the prioritization of the high status patient t (31) =-.73, p =.47, nor aversive responses to high status patients perceived with high responsibility differed from the ones with low responsibility, t (31) =-.29, p =.76 .

Discussion

The experiment manipulated the salience of meritocracy norm (*vs*. neutral) and the perceived responsibility for the disease (high *vs*. low). We hypothesized that when framing a high responsibility for the disease, people would evaluate targets differently as a function of social status, particularly when meritocracy was salient. The results support the idea that if meritocracy beliefs facilitate group-based distinctions, then when is salient, the patient's social status is likely to influence decision-making outcomes. This seems particularly true when framing responsibility for illness as personally high. Specifically, priming high responsibility favored low status recommendation more (*vs*. high status), compared to low individual responsibility.

The results showed that in the condition of low responsibility, the low status recommendation for transplantation was not qualified by the meritocratic prime. When meritocracy was salient, the low status patient was equally prioritized for transplant as the high status patient, suggesting that meritocracy does not operate as a facilitator of distinctions between targets, when patients are not deemed personally responsible for their medical condition. This complements previous research (Pratto et al., 1999) by clarifying under which circumstances priming ideological thinking (meritocracy *vs*. neutral) is more likely to influence (or not) resource allocations.

Interestingly, when zooming in and looking solely at the effect of responsibility on the prioritization of the low status target, the evidence showed a lower prioritization in the low responsibility condition (*vs*. high responsibility), thus suggesting slightly more aversive responses towards the low status patient, when not deemed personally responsible for his disease. An explanation for the finding is possible. In the condition of low responsibility, the disease presented described a genetic cause. Drawing on evolutionary psychological processes, a group of researchers has studied how certain physical features can trigger intergroup bias. In particular, how superficial cues as bodily cues (e.g., lesions, rashes) or obesity may trigger the specific set of psychological responses that evolved to inhibit social contact with diseased individuals (Park, Schaller, & Crandall, 2007; Schaller, Park, & Mueller, 2003). For example, Park, Schaller and Crandall (2007) found that obese people were implicitly associated with disease-relevant concepts, and this association was especially strong following experimentally induced pathogen salience. This apparent association resulted in greater antipathy toward obese people when perceivers feel more vulnerable to pathogen-disease content. Along this lines of reasoning, it is plausible to think that perceiving a genetic – based disability may activate disease-relevant cognitions, that may decrease the pro-bias response depicted in Figure 1, particularly when the meritocracy norm was salient. If having a genetic disease indicates lesser physical fit and capability (Park, Schaller & Crandall, 2007), it may increase more powerful aversive responses to genetic cues. Particularly, if genetic cues are indicative of physical fit and capability, then it is possible that following experimentally induced meritocracy beliefs, perceiving a genetic –based disability may activate rationing criteria, associated with merit principles, as health maximization. Health maximization is a principle suggesting that patients with better prognosis should be prioritized. Thus, those who profile indicates lesser genetic fit, may be more likely to have a worse prognosis. If such a relation exists, an implication is that patients perceived with a genetic –based disability may inspire more aversive responses (Park, Schaller & Crandall, 2007), because they may be seen as less biological apt to survive. And this aversive response can have greater negative implications for lower status groups. This conjecture can be addressed by future empirical study.

Our theoretical proposal, in conjunction with causal attributions of the disease (e.g., Ubel et al., 2001) and resource allocation models (Pratto et al., 1999; Skikta & Tetlock, 1992), proposed that Meritocracy could influence how people allocate decisions, particularly when framing the cause of the illness in a way that one can infer the patient's personal responsibility for being in that

state of health. As predicted, when framing a high responsibility for the illness, participants showed higher status-based distinctions in priority ratings, supporting the idea that meritocracy, particularly through the work of its internal control component associated with high personal responsibility, influenced the evaluation about who is more meritorious to be prioritized. However, contrary to our predictions, low status patients were more likely to be recommended for a heart transplant, than the high status target. There are a few potential explanations. For example, low status favoring biases are more likely to occur in situations containing guidelines that clearly prescribe the evaluations, as opposed to conditions under which evaluation criteria are ambiguous (Gaertner & Dovidio, 1981). Another possible explanation for the over-correction effect has to do with the participants becoming aware of the study's intent (Dutton, & Lake, 1973) and having unlimited time to think and make the decision. Research has shown that when participants become aware of the study's intent (e.g. racial issue), this awareness may motivate participants to correct their behavior. This correction can be done in the sense of favoring the reaction toward the low status target because participants feel motivated to control prejudice in their own behavior (Dunton & Fazio, 1997; Plant & Devine, 1998). Thus we have a solid reason to suspect that if the participant had less time to decide, this condition would facilitate the expression of bias. Thus, in Study 3, we conducted an experiment manipulating the salience of meritocracy (salient *vs*. neutral) and added a time pressure manipulation.

Study 3

Overview

Results from study 2 support the notion that priming meritocracy motivates individuals to judge and evaluate targets differently as a function of social status when varying the degree of responsibility for the disease presented (e.g. high personal responsibility *vs*. low personal responsibility).

However, our results revealed a compensation for the low status target showing a pro-bias effect when decision-making. One possible explanation has to do with participants becoming aware of the study's intent. According to the literature on implicit attitudes, when participants become aware of the study's intent (e.g. racial issue), if they have the opportunity and motivation to think beforehand about the consequences of their decisions (e.g. discrimination), explicit attitudes will primary drive their responses (Fazio, 1990; Wilson, Lindsey, & Schooler, 2000; Dovidio, Kawakami, Johnson, Johnson, & Howard, 1997). Such attitudes may include a motivational component likely to curb the influence of one's prejudice in their response low status target (Plant & Devine, 1998). In fact, in the previous study, participants had sufficient time (e.g. opportunity) and therefore, might have been motivated to control for prejudice, which may have resulted in overcorrecting their responses toward the low status target.

But, as evidence suggests, when the opportunity is not permitted (e.g., because of time pressure) implicit attitudes might be more influential (Dovidio et al, 1997; Fazio, 1990; Olson, & Fazio, 2004; Wilson et al., 2000). Consistent with this, studies in medical decision-making show that when the opportunity is absent (e.g. time pressure or cognitive load) participants are more likely to rely on implicit stereotypes and racial bias during decision-making (Burgess et al, 2014; Stepanikova, 2012). For example, Burgess and colleagues (2014) showed that male physicians were more likely to prescribe opioids for Black than White patients under low cognitive load. In contrast, under high cognitive load, they were less likely to prescribe opioids for Black than White patients. This example shows how limiting cognitive resources can shift the response toward low status targets, particularly, Black patients.

Thus, in Experiment 3 we kept only the condition of high responsibility and we added a time pressure condition to examine the effect of the meritocracy salience on decision making. Replicating the previous paradigm, we hypothesized that under the salience of meritocracy, participants in the high-pressure condition would be more likely to be influenced by racial bias (target status). Specifically, we hypothesized that when under pressure, meritocracy-primed participants would be more likely to assign a lower priority level to low status, relative to the high status target.

Method

Method and Procedure

A total of 93 participants were invited through a server list to participate in a social psychology experiment in the Lab, in exchange for a 5 € gift card. Participants were excluded from all analyses if they have other nationality than Portuguese and/or failed the immigrant status check (i.e. an item assessing the social category: "was there any patient case with a nationality other than Portuguese?"). Potential multivariate outliers were detected in these individuals' data using Bonferroni correction. After list-wise exclusion of 5 individuals whose data may have included outliers, 58 participants remained (70.7% female, M_{age}=23.23, SD= 3.99).

Again, the experiment employed a two-study ruse. Participants were told they were taking part in two separate studies, one on 'Cognitive Performance' and one on 'Decision Making Processes'. After completing the 'first study', they proceeded to the "Decision Making Processes" study and were randomly assigned to one of the two time-pressure conditions. In the high-pressure condition, after being told to evaluate the clinical cases of six patients on the waiting list, participants were asked to evaluate as quickly as they could within the 50 seconds provided for each patient. In the low-pressure condition, we provided the same instructions from the previous experiment. Afterward, participants completed a section of scale measures assessment, manipulation check items, and sociodemographic items, and were briefly debriefed.

Measures

Dependent Variables. The same 7-points rating scale was used, rating from low priority (1) to high priority (7). Additionally, participants were asked how confident they were in the opinion expressed previously, ranging from not at all (1) to very confident (7), and the degree of severity attributed to disease, ranging from not severe at all (1) to very severe (7).

Manipulation check

Time pressure. Participants were asked to indicate in a 7-points scale, from not at all (1) to highly pressured (7) how much they agree they had enough time to assess each case correctly and to make the best decision.

Meritocracy Salience. Participants were asked in an open-ended question, whether they recalled any words related to merit.

Results

Preliminary Analysis

As shown in Table 1 the level of priority for the high status target is positively and strongly associated with the level of priority for the low status target $r(63)=.61$, $p = .001$. Meritocracy endorsement is unrelated to the level of priority assigned for low status target $r(63)=-.05$, $p = .70$, and high status target $r(63)=-.03$, $p = .81$. Gender is associated with the level of priority assigned for low status target $r(63)=.33$, $p =.007$, but unrelated with priority for the high status target $r(63)=.15$, $p =.23$, higher prioritization of low status patient is associated with being women. On average, women (N=43) assigned a higher priority (M=5.83, SD=.83) than male participants (N= 20; M= 5.18; SD= .81).

Data from the manipulation check of time pressure showed that participants felt more pressure in the time pressure condition (M=5.19, SD=1.64) than in the no time pressure condition (M=3.96, SD=1.28), $t(82) = 2.694$, $p =.009$.

Regarding the merit priming, there were significant differences between the meritocracy priming and control $\chi^2(2) = 31.194$, $p < .001$. Results indicated that participants in the meritocracy condition were the ones who reported remembering words related to merit. Participants in control condition reported no merit related words.

Table 1. Descriptive statistics and intercorrelations for study sample

Variable	**M**	**SD**	**2**	**3**	**4**	**5**
1. Priority for High Status	5.62	.86	**.61****	-.04	**.32****	-.05
2. Priority for Low Status	5.58	.86		-.05	.08	-.03
3. Prime: Meritocracy					-.03	-.07
4. Prime: Time Pressure						.12
5. Descriptive Meritocracy	3.47	0.64				

Main Analysis

A 2 (Prime: meritocracy *vs*. control) by 2 (Target Status: high *vs*. low) by 2 (time pressure: high *vs*. low) mixed-design ANOVA with repeated measures on the second factor yielded one interaction effect of target status*time pressure F (1, 55) = 7.203, p = .01, η_p^2 =.116. Follow-up paired t-tests indicated that, participants in the high-pressure condition, were marginally more likely to assign a lower priority to the low status target (M=5.68; DP=0.75), than high status (M=5.94; DP=0.81), t(30)=1.858, p=.07; and participants in the low-pressure condition were more likely to assign a higher priority to low status (M=5.59; DP=1.01) than high status (M=5.37; DP=0.84), but this difference did not reach significance, t(26)=-1.654, p =.11. Additionally, a triple interaction effect of prime*target status*time pressure was found on priority F (1, 55) = 4.07, p = .05, η_p^2 =.069. Pairwise comparisons revealed that when meritocracy was salient, the effect of time pressure on the decision toward the low status patient significantly varied. While under no pressure, merit primed participants were significantly more likely to assign a higher priority to the low-status target (M = 5.70; DP = 1.03), than high status (M = 5.31; DP = .86), F (1,54) =3.65 p = .06, η_p^2 =.06; when under pressure, merit-primed participants were significantly

more likely to assign a lower priority to the low status (M = 5.43, DP = .65), than high status ((M = 5.93, DP =.83) F (1,54) =6.64 p = .01, η_p^2 =.11. In the neutral condition, the results showed that participants in the no pressure and under pressure conditions equally prioritized the high and low status patients, $F_{no\ pressure} < .15$ and $F_{under\ pressure} < .11$ (*see* Figure 2).

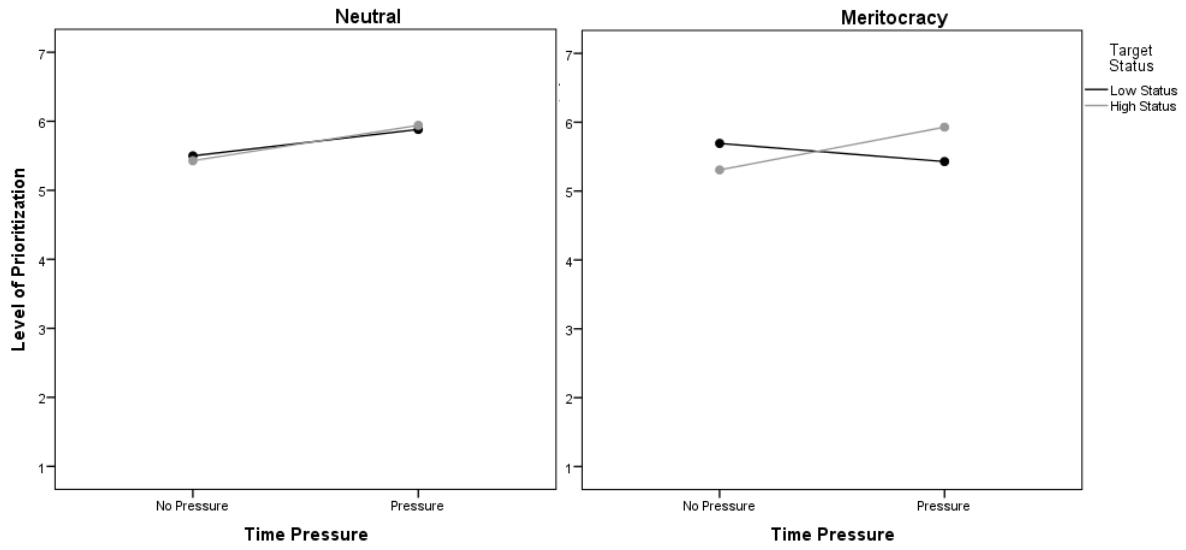

Figure 2. Prioritization of patients for a heart transplant, as a function of time pressure and Target Status at each level of meritocracy prime condition.

Discussion

Study 3 offers direct evidence that limiting cognitive resources shifts the response the low status target, particularly when meritocracy was salient. As predicted, this interaction was qualified by the meritocracy prime. When meritocracy was salient, participants in the high-pressure condition were more likely to assign a lower priority level to low status, compared to the high status target. These results are consistent with research showing that priming meritocracy predicts less favorable decisions low-status groups (Castilla & Bernard, 2010; McCoy& Major, 2007; Thompson, 2015).

The low-pressure condition replicated the pattern found in the previous study (i.e., the high responsibility condition). When participants have unlimited time to decide, the low status patients are more likely to receive favorable ratings than the high status patients. This compensation effect probably occurs because participants are conscious of the racial nature of the study. In fact, participants in the analysis passed the immigrant status check, assessing whether they remember any patient with a nationality other than Portuguese. This awareness may have motivated participants to correct their behavior. This correction was done in the sense by favoring the reaction toward the low status target. And one possible explanation for this compensation effect relies on the motivation to control prejudice and its influence on their own behavior (Dunton & Fazio; 1997; Plant & Devine, 1998).Thus, in the next study, we explore whether motivation to control prejudice may account for this result.

We acknowledge that are limits for the effect found. Having a small sample means that the number of subjects per cell is low and therefore the result achieved may be due to the existence of extreme scores. This could have been the case, but the extreme outliers were previously removed during treatment of the database, so we discarded this possibility. We do not rule out, however, the hypothesis of false-positive effect. In fact, the effect is small, which means that to ensure that the effect is true it needs to be replicated. Thus, in the following study, all participants will be exposed to the meritocracy prime and participants will be randomly assigned to one of the two conditions of the time pressure manipulation.

Study 4

Overview

Study 3 replicated the pattern found in the high responsibility condition of study 2: when participants had unlimited time to decide, the low status patient received a more favorable evaluation, particularly after being primed with a meritocracy norm. It is possible that under no pressure, participants make use of a deliberative and conscious processing, allowing and motivating not only to intentionally suppress negative attitudes, but also to overcorrect one's responses the low-status target (Judd, Park, Ryan, Brauer, & Kraus, 1995; Dovidio, Kawakami, Johnson, Johnson, & Howard, 1997). Consistent with Devine and Monteith's (1993) theorizing about prejudice reduction, Plant and Devine (1998) argued that people could be motivated to respond without prejudice for internal (personal) reasons or for external (normative) reasons. Internal motivation to respond without prejudice arises from internalized, personally important nonprejudiced beliefs (i.e., the standard against which one's prejudice- relevant responses are evaluated), whereas external motivation derives from a desire to avoid negative reactions from others if one were to respond with prejudice (i.e., others impose the standard against which one's prejudice-relevant responses are evaluated).

Another issue brought up by the previous results suggests that this over-correction towards the low status target occurs mainly after being primed with meritocracy. But why do people who were previously exposed to meritocracy express a greater tendency to correct their reaction toward low status patients? Are primed-subjects more motivated to correct their evaluations about low status members? We sought to explore whether the motivation to control for prejudice (Plant & Devine, 1998) would account for the previously found pattern.

Plant and Devine (1998) conducted a series of studies in which they demonstrated that scores on the Internal Motivation Scale (IMS) were highly correlated with traditional measures of prejudice, including the Attitude Blacks scale (ATB; Brigham, 1993) and the Modern Racism Scale (MRS; McConahay, 1986), such that higher levels of internal motivation were associated with lower prejudice scores. In contrast, the external motivation scale (EMS) scores were only modestly correlated with traditional prejudice measures, such that high levels of external motivation were modestly associated with higher prejudice scores. Moreover, their research

suggested that EMS assesses a specific concern with how prejudiced responses will be evaluated rather than a general concern with social evaluation. Additionally, internal and external motivation to respond without prejudice scales were shown to be independent constructs, suggesting that individuals can be motivated to respond without prejudice primarily for internal reasons, primarily for external reasons, or for both internal and external reasons, or they may not be motivated to respond without prejudice for either reason.

Thus, in experiment 4 we sought to examine whether the motivation to control prejudice would partially explain the compensation effect, found in the low-pressure condition. To that end, in this experiment, all participants were exposed to the meritocracy prime and time pressure paradigm was replicated. We measured the target's evaluation and priority for tranplant as in the previous experiments.

According to our previous results, we expected time pressure to moderate the effect of target status on a) evaluation of the transplant benefit for the patient and b) the recommendation for transplant. Specifically, we expected that: 1) in the low-pressure condition, participants would be significantly more confident on the benefit of the transplant for the low-status target than high status, i.e. an over-correction effect; and 2) in the high-pressure condition, participants would be significantly more confident on the benefit of the transplant for the high-status target than low status. We expect a similar pattern for the second dependent variable, the recommendation for transplant. So, in the low-pressure condition, we expected to replicate the results found in study 3, showing a higher priority for the low-status target (*vs.* high status) and a lower priority for the low-status target (*vs* high status), in the high-pressure condition.

The second set of hypothesis refers to the mediating role of motivation to control prejudice on the relationship between time pressure and target evaluation bias. Does the relationship between time pressure and the likelihood of an overcorrection effect depend on the degree of motivation the participant has to control prejudice? If so, we expect an effect of the condition of time pressure on the motivation to control prejudice. If time pressure is associated with motivation to control prejudice would the relationship between time pressure and confidence on the low status (*vs*. high target) be dependent on the motivation to control prejudice? Particularly, if having the cognitive-processing resources available (low-pressure condition) makes individuals to be more concerned about their own prejudice (Dunton & Fazio; 1997; Plant & Devine, 1998), are those highly motivated to control their prejudice and concerned about appearing nonbiased, producing a more

favorable evaluation of low status target? But when the cognitive resources are limited (high-pressure condition), does it decrease the motivation to control prejudice and the concern about appearing nonbiased, which in turn shifts the previous favorable reaction toward the low status target?

Following these questions we expect that (H1) the effect of time pressure would be significant, in that the level of motivation to control prejudice to be relatively dependent of the time pressure condition; (H2) we expect a significant effect of target status on target evaluation when controlling for motivation to control prejudice; (H3) we expect the interaction term target status × motivation in the target evaluation to be significant when including in the analysis the time pressure condition, in that we expect that the evaluation of the low status (*vs.* high status target) would vary when we control individuals motivation to control prejudice, when they are under pressure (i.e. high-pressure condition) and when they are not under pressure (i.e. low-pressure condition).

Dependent Variables

Target Evaluation. Participants were asked to indicate in a 7-points scale, from not at all (1) to highly confident (7) how confident they were that the person would benefit from the heart transplant.

Strength for the Transplant Recommendation. Participants were asked to indicate in a 7-points scale, from not at all (1) to very strongly (7) how strongly would they recommend the person for the heart transplant.

Manipulation check

Target prime. Participants were asked whether they had to evaluate a non-Portuguese patient in a dichotomous variable (no/yes), and those who selected "yes" were asked to indicate the nationality of the target, being the available options: Cape-Verdean, Angolan, Brazilian and Ukrainian.

Time pressure. In a 3-item scale adapted from Rosa and Waldzus (2012) participants were asked to indicate from strongly disagree (1) to strongly agree (7) whether they (a) felt under pressure (b) were given enough time to answer, and (c) were feeling much pressure during decision making (α = .79).

Motivation to respond without prejudice. An 8-item scale from Plant and Devine (1998) and validated for Portuguese (Palma & Maroco, 2008) was used to assess participant's motivation to behave in a non-prejudiced way Blacks. Participants indicated their agreement on 7-point scales ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). The external motivation to control prejudice sub-scale had good internal consistency (e.g., "Because of today's politically correct standards, I try to appear non-prejudiced toward Black people"; α = .80); however, the internal motivation sub-scale (e.g., "I attempt to appear non-prejudiced toward Black people because it is personally important to me") showed an unacceptable reliability, α = .34. We analyzed whether these 4 internal items would load in two different factors. The results from the factorial analysis (principal axis factoring method of extraction with *oblimin* rotation) demonstrated that the items loaded on two distinguishable factors, explaining 47% of the shared variance: Factor 1 loaded the items concerning the motivation to control the use of stereotypes against Black people (eigenvalue = 1.60; factor loadings from .81 to .50) ; Factor 2 loaded the items about the importance for the self of being unprejudiced (eigenvalue = 1.29; factor loadings from .67 to .65). Then and after appropriate reverse coding of one item, participants' scores on the items were averaged within each scale: IMS-1, IMS-2, and EMS, with higher scores reflecting higher levels of the relevant motivation. The IMS-1 and IMS-2 were not correlated (r =.07, *ns*) and EMS was negatively correlated with IMS-1 (r = - .24, p =.02) and with IMS-2 (r = - .21, p =.04).

Method

Participants. A total of 109 participants (lay people) completed the online survey in exchange for entering a 20 euro voucher lottery. Nine participants who completed the survey but indicated a different nationality were removed, two participants did not complete the unscramble sentence task and two additional participants were removed due to the existence of multivariate outliers. Final sample comprised 96 participants (69 % women, M_{age} = 22.49, SD_{age} = 5.83) varying in educational attainment, from high school degree (40.6 %), bachelor's (42.7%), Master's (14.6%) and doctorate (2.1%) degree.

Procedure. The general procedure was the same used in study 3. Participants were asked to perform the same unscrambling sentence task, used in the previous study representing the meritocracy implicit prime. They were then randomly assigned to either the high-pressure condition or the low-pressure condition. In the high-pressure condition, after being told to evaluate the clinical cases of six patients on the waiting list, participants were asked to evaluate as quickly as they could within the 50 seconds provided for each patient. In the low-pressure condition, we provided the same instructions from the previous experiment. Afterward, participants completed manipulation check items and sociodemographic items and were briefly debriefed.

Results

Preliminary Analyses

Table 1 shows positively and strongly associated with low status evaluation r (96)=.75, p = .000. A similar pattern can be seen for the strength of recommendation for transplant, r (96)=.52, p = .000 and for target's perceived competence r (96)=.56, p = .000. Internal, external motivation and gender were unrelated to each of the dependent variables.

Table 1. Descriptive statistics and intercorrelations for study sample.

Variable	M	SD	2	3	4	5	6	7	8	9
1. Target Evaluation - High Status	4.40	1.14	**.75****	**.71****	**.48****	**.45****	**.32****	-.10	-.10	.10
2. Target Evaluation - Low Status	5.28	1.25		**.59****	**.41****	**.48****	**.35****	.11	-.20	.10
3. Recommendation - High Status	5.29	1.04			**.62****	**.52****	**.34****	.01	-.10	.03
4. Recommendation - Low Status	5.24	1.22				**.46****	**.56****	.02	-.10	-.02
5. Target Competence - High Status	5.26	1.06					**.69****	.08	-.11	-.08
6. Target Competence - Low Status	4.97	1.23								
7.Internal Motivation	6.03	.65								
8. External Motivation	2.07	1.43								
9. Time Pressure										

Manipulation check

Data from the manipulation check of time pressure showed that participants felt more pressure in the high-pressure condition (M=4.92, SD=1.41) than in the low-pressure condition (M=2.72, SD=1.42), t (94) = - 7.69, $p < .001$. This analysis indicated that the time pressure manipulation had its intended effect of challenging participants' cognitive processing resources.

Data from the manipulation check of target status indicated that 10 participants (10.5%) reported having not seen a non-Portuguese patient, and 86 participants (89.5%) reported having evaluated the non-Portuguese patient[8]. 83 out of the 86 identified the patient as being Cape-Verdean, and the remaining two identified the patient as being Angolan.

Main analysis

Confidence about the benefit of the transplant. A 2 (Target Status: high low) by 2 (time pressure: high . low) mixed-design ANOVA with repeated measures on the first factor yielded no significant interaction of target status×time pressure F (1, 94) = 2.524, p = .12, η_p^2 = .03.

[8] The subsequent analyses did not show significant differences between the sample of 96 and the sample of 86 participants, so we maintained the complete sample in subsequent analyses, for reasons of statistical power.

Nevertheless, we further looked at pairwise comparisons between low and high status at each level of the time pressure condition. Participants in the low-pressure condition did not significantly compensate the low status target, F (1, 94)=.03, *ns*. The mean difference between the low status target (M=5.31; SE=0.18), and high status (M=5.29; SE=0.16) was rather small. But in the high pressure condition participants were significantly less confident on the benefit of the transplant for the low status target (M=5.26; SE=0.18), relative to the high status (M=5.51; SE=0.17), F (1, 94) = 4.24, p = .04.

The strength of recommendation. A 2 (Target Status: high low) by 2 (time pressure: high low) mixed-design ANOVA with repeated measures on the first factor yielded no significant main effects $F_{\text{Target Status}}$ (1, 94) = .27, *ns*, nor interaction effects $F_{\text{target status*time pressure}}$ (1, 94) = .27, p = .60, η_p^2 = .00.

Examining the partial effect of motivation to respond without prejudice on the relationship between time pressure and confidence about the benefit of the transplant.

Based on the previous results, in the next step of our analysis we hypothesized that in the low-pressure condition, participants would be more motivated to control prejudice, which in turn would lead to a compensation effect. In the high-pressure condition, we expected that the motivation to control prejudice would no longer be necessary. Thus, according to our rationale, the impact of time pressure manipulation on the confidence on the low status and high status target status would occur through changes in the level of motivation to respond without prejudice. In order words, we expected motivation to respond without prejudice to mediate the relationship between the experimental condition (i.e., time pressure) and the outcome variable (i.e. confidence on the target).

The classic condition for establishing a within-subject mediation, as identified by Judd, Kenny and McClelland (2001) imply that there will be a condition difference (i.e. time pressure) in motivation to control for prejudice levels. Second, the motivation to control for prejudice must be predictive of the low-high status confidence differences. Third, the motivation to control for

prejudice will predict lower differential decisions, when holding constant the treatment condition (i.e., time pressure manipulation). And fourth, the effect of the time pressure treatment on evaluating differently the low and high status patient will be reduced when motivation is controlled. Following Judd, McClelland, and Ryan (2017) procedure for analyzing partial mediational effects in an ANCOVA model, the first two premises were assessed by a separate model, for each dependent variables: the confidence on the target (within-factor ANOVA) and the motivation to control prejudice (one-way ANOVA). The third and fourth premises were assessed by a single ANCOVA model, using time pressure manipulation and motivation to control for prejudice as predictors of confidence on the target.

As to the first premise, the analysis indicates that the mean for motivation to control for prejudice in the low-pressure condition is marginally different from the mean difference in the high-pressure condition, F (1, 94) = 3.59, p = .06, η_p^2 = .04.

As to the second premise, motivation to control for prejudice was regressed in the low status minus high status difference computed score. The results indicate that the overall model is significant R^2= 0.8, F (1, 94) = 8.57, p = .004, with motivation to control for prejudice significantly predicting differences in the evaluation scores between low and high status target, b_1 = .38, SE = .13, t = 2.93, p = .004, in that higher motivation to control prejudice predicts a more positive evaluation of the low target, relative to the high target ($b_{targetstatus}$ = -.12, SE = .08, t = -1.36, p = .18).

To examine the third and fourth premise, we tested whether target status (X) impact on the confidence on the target (Y) varied as a function of the time pressure, when controlling the motivation to control prejudice (Cov). Thus, we ran a two-way mixed ANCOVA, where target status (low high) is a within-factor and time pressure (low-pressure vs high-pressure) a between factor; and motivation to control prejudice the continuous covariate variable.

The analysis yielded a significant effect of the target status, suggesting that participants were significantly less confident on the benefit of the transplant for the low status target (M=5.28; SE=0.13), relative to the high status (M=5.40; SE=0.12), F (1, 93) = 7.83, p = .006, η_p^2 = .08. In addition, the difference between low high target scores on confidence has a significant interaction effect with motivation to control prejudice F (1, 93) = 7.11, p = .009, η_p^2 = .07. In other words, the mean difference between low and high status target is significantly different when subjects are

under pressure (high-pressure condition) and when they are under no pressure (low-pressure condition) when controlling for participants internal motivation to control prejudice.

Finally, the interaction term target status × time pressure is reduced when motivation to control prejudice is taken into account, F (1, 93) = 1.21, p = .28, η_p^2 = .02, suggesting that the mean difference in the confidence low high target is not statistically different between low-pressure and high-pressure condition, when entering the covariate in the model.

Accordingly, it seems that the four conditions for establishing a mediation have been met. Namely, the time pressure condition has a marginally effect on the mediator. The mediator significantly affects the outcome, when controlling for time pressure condition, whereas, when controlling for the mediator the effect of the time pressure condition is even more reduced. In addition, the indirect effect is significant, b = .08, SE = .08 (IC 95%: .00; .27).

In sum, this set of results seems to indicate that, in the low pressure condition, i.e. when in a deliberative process, subjects engaged in a motivated reasoning to control prejudice, which in turn, decreased the distinctions about low-high status in the outcome variable, the confidence in the target. However, when under high pressure, the cognitive processing motivation to control prejudice is no longer necessary, thus leading to a more unfavorable evaluation of the low-status patient (see Figure 1).

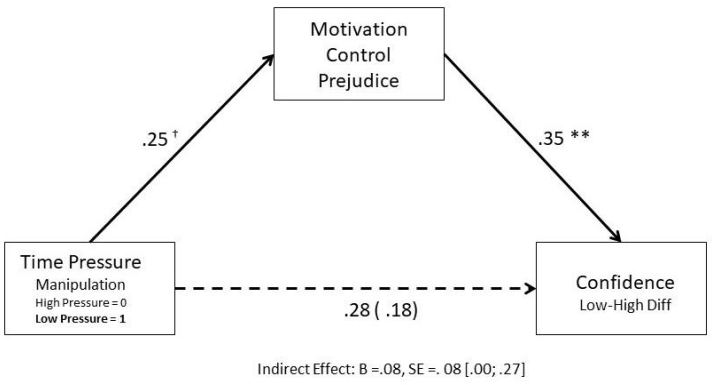

Figure 1. Standardized regression coefficients for the relationship between time pressure and target evaluation mediated by motivation to control prejudice. The standardized regression coefficients between time pressure and target evaluation controlling for motivation to control prejudice, is in parenthesis.

Discussion

Based on results from study 3, in study 4 we hypothesized that in the low-pressure condition, participants would be significantly more confident on the benefit of the transplant for the low-status target than high status, thus a replication of the effect; and in the high-pressure condition, participants would be significantly more confident on the benefit of the transplant for the high-status target .

Additionally, we expected a similar pattern for the second dependent variable, the strength of recommendation. The present study did not fully replicate the previous findings, though it has shown a similar pattern of results. In the low-pressure condition, merit primed participants did not significantly distinguish between low and high status target, as they did in the previous study. Participants overcorrected (e.g. confidence on the low-status > confidence on the high-status) slightly for the low status target, relative to the high status, yet this difference did not reach statistical significance. Participants in the high-pressure condition were significantly less confident on the benefit of the transplant for the low status target high-status. We expected a similar pattern for the strength of recommendation dependent variable. This study was able to maintain the direction of the slopes for both levels of the experimental manipulation, however, it did not fully replicate the previous findings.

In the next step of our analysis we hypothesized that, in the low-pressure condition, participants would be more motivated to control prejudice, which in turn would lead to a compensation effect. In the high-pressure condition, we expected motivation to control prejudice would no longer be necessary. Thus, the impact of time pressure on the confidence on the low status and high status target status would occur through changes in the level of motivations to respond without prejudice. In order words, we expected motivation to respond without prejudice to mediate the relationship between the experimental condition (i.e., time pressure) and the outcome variable (i.e. confidence transplant benefit). As predicted, the results suggest that, in the low-pressure condition, i.e. when in a deliberative process, participants engaged in a motivated reasoning to control prejudice, which in turn, decreased the distinctions between low-high status

on the confidence on the benefits of the transplant for the target. However, when under high pressure, the cognitive processing necessary to control the prejudice is no longer required, thus resulting in evaluations that are not necessarily more generous the low status target.

The data showed that low status-favoring responses under the salience of meritocracy appear to be conscious. Particularly, when individuals have the opportunity and time to make a deliberative decision. According to the literature on normative values and attitudes about low status groups, meritocracy is seen as a social norm that contributes to the facilitation of bias (Kinder & Sears, 1981; McConahay, 1986; Biernat, Katz & Hass, 1988). Therefore, the salience of values of merit, work, effort, competence, and success would be associated with a more negative perception of black people because they do not represent the set of values highlighted. For this reason, in the absence of such values, the subject would produce a pro-Black response, by virtue of the anti-prejudice norm. However, what these results show is that in the presence of meritocratic values, the subject produces a pro-Black response, by virtue of a motivational need to control prejudice. This is inconsistent with previous studies showing that, when meritocracy is salient, it facilitates low status-disfavoring responses (e.g., Castilla & Bernard, 2010). Moreover, if meritocracy is an important socio-normative context for expressing more negative reactions and feelings towards disadvantaged groups (e.g., Katz & Hass, 1998), why is it that when it is salient, people need to regulate their behavior in order to restrain expressions of prejudice?

In the next step, we conducted a systematic review of the current literature about (a) the impact of Meritocracy on attitudinal and behavioral outcomes low status groups and (b) the prime used to experimentally test the effect of Meritocracy on intergroup outcomes.

Chapter IV

A systematic review of meritocracy primes in intergroup relations

This chapter is based on:

Madeira, F., Costa-Lopes, R., Dovidio, J., Freitas, G., & Mascarenhas, M., (2019). Primes and consequences: a systematic review of meritocracy in intergroup relations. *Frontiers in Psychology*. doi.org/10.3389/fpsyg.2019.02007[9]

[9] As the first author, I was the primary responsible for the design, data analysis and writing of the studies reported in this paper. The second and third co-authors (my doctoral advisors) provided fundamental guidance and supervision

Study 5

Abstract

Psychological interest in Meritocracy as an important social norm regulating most of the western democratic societies has significantly increased over the years. However, the way Meritocracy has been conceptualized and operationalized in experimental studies has advanced in significant ways. As a result, a variety of paradigms arose to understand the social consequences of Meritocracy for intergroup relations; in particular, to understand the adverse consequences of Meritocracy for disadvantaged group members. Beyond understanding whether Meritocracy disproportionally affects members of low status groups, there is a need to deepen the knowledge of how the core components of Meritocracy have been independently or jointly used as a prime. And this is particularly important given the recent call for greater transparency in how the success of experimental manipulations is reported. Thus, we carried out a systematic review examining the content of different prime tasks, summarizing prime manipulation checks' effectiveness, and analyzing whether priming Meritocracy leads to less favorable orientations toward low status groups. Results across 32 studies revealed that despite the existing differences in the components highlighted, the salience of any of the Meritocracy dimensions facilitates the use of internal causal attributions, negative evaluations and stereotyping towards low status groups, affecting negatively decisions involving low-status group members, particularly in domains, as organizational contexts. These results carry both practical and theoretical implications for future research on the role of Meritocracy in intergroup settings.

Introduction

Psychological interest in the belief of Meritocracy has significantly increased in the past 25 years. A social system is a Meritocracy when outcomes as wealth, jobs, and power are distributed on the basis of hard work, strong motivation, and personal ability (Kluegel & Smith, 1986; Jost &

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throughout the entire process, the last two co-authors collaborate in the data collection phase, ultimately leading to the publication of this manuscript.

Banaji, 1994). Meritocracy beliefs are a psychological construct involving socially shared perceptions of a social system as meritocratic, which may or may not conform to the actual meritocratic nature of the system. A reason for the increasing interest in Meritocracy beliefs has to do with the merit-based rewarding system, very appealing among progressive societies, embodying a preference for social equity principles (Deutsch, 1975; Tyler, 2014). In fact, the practicing of rewarding good (or right) deeds is a symptom of a well-functioning society. Thus, the art of developing an incentive system based on the idea of merit has gained strength in the development of educational, organizational and social policies, and has become an integral part of political discourse, particularly among western countries (e.g., Britain, the great Meritocracy: Prime Minister's speech, 2016). The current work aims to present a systematic review of the research using priming as a tool to activate meritocracy beliefs and subsequently testing its influence on psychological and behavioral outcomes involving low status groups.

In a psychological sense, Meritocracy beliefs constitute a worldview, or ideology, that broadly embraces the idea that equal opportunities exist, allowing upward social mobility (Feldman, 1983; Hochschild, 1996) in a way that individuals can change their economic and social circumstances (Taylor & Moghaddam, 1994). Economic and social success achieved is determined by internal factors, such as hard work, ability and individual responsibility, and not by privileged social relationships. Thus, individual merit, rather than social or power categories (Tajfel, 1978), determines individual success because any individual can improve their social status as long as they work hard, are motivated, and talented (Kluegel & Smith, 1986; Jost & Banaji, 1994).

Meritocracy beliefs shape the way people make sense of how the social system works, thus providing the means to understand the existing social system (Ledgerwood, Mandisodza, Jost, & Pohl, 2011). As such, it has far-reaching intergroup consequences. For example, Meritocracy beliefs inform how people perceive economic inequalities, low-status groups discrimination and high-status groups privilege (Knowles & Lowery, 2012; Kraus, Onyeador, Daumeyer, Rucker, & Richeson, 2019; McCoy & Major, 2007; Ho, Sanbonmatsu, & Akimoto, 2002). Meritocracy beliefs influence the way people show support for policies designed to reduce group-based inequalities (Kluegel & Smith, 1986; Son Hing, Bobocel, & Zanna, 2002; Garcia, Desmarais, Branscombe, & Gee, 2006). Moreover, the extent to which individuals believe in Meritocracy seems to broadly influence their well-being. (Quinn & Crooker, 1999) and influence health (Rusch,

Todd, Bodenhaousen & Corrigan, 2010; Kwate & Meyer, 2010), school outcomes (Darnon, Wiederkehr, Dompnier, & Martinot, 2018).

Of particular interest for the present work is research evidence suggesting a significant relationship between Meritocracy beliefs and negative intergroup attitudes (Rosenthal, Levy, & Moyer, 2011). Thus, given the theoretical and social relevance of Meritocracy beliefs, we provide a comprehensive integration of Meritocracy primes affecting psychological and behavioral intergroup outcomes. Meritocracy primes are cues, which may be consciously recognized (explicit primes) or unconsciously perceived (implicit primes) that activate Meritocracy beliefs.

As mentioned earlier, the form in which the term Meritocracy is portrayed in the literature varies. One way is the conceptualization of Meritocracy beliefs as one among various ideologies that serves to maintain a status-based hierarchy (Major & Kaiser, 2017). In this conceptualization, the term status-legitimizing beliefs (SLBs) is used to describe how hard work and upward social mobility, components of Meritocracy, are used to interpret situations in ways that justify social inequalities (Jost, Banaji, & Nosek, 2004; Jost & Hunyady, 2005). Thus, SLBs contain two out of the four Meritocracy beliefs core dimensions.

Another way is the Protestant Work Ethic belief (PWE; Weber, 1958). PWE reflects the belief that hard work leads to success, which as described earlier, is a core component of Meritocracy beliefs. Thus, PWE belief is a component of Meritocracy. Interestingly, both conceptualizations of Meritocracy belief seem to converge to the same *justifying* motivated reasoning (Kunda, 1990) through which low-status individuals are allegedly more likely to be discriminated against, and more likely to be held responsible for their relative disadvantage position (Major & Kaiser, 2017, Levy, Freitas, Mendoza-Denton, Kugelmass, & Rosenthal, 2010; Levy, West, & Ramírez, 2005; Levy, et al., 2006).

Despite these similarities, few attempts have been made to systematically integrate the findings of these two lines of research. Such integration could allow a theoretical unification that (a) incorporates Meritocracy, SLBs and PWE effects on socially relevant intergroup outcomes; (b) delimits the conditions under which different processes come into play within these concepts, and (c) clarifies which dimensions of each construct are being primed for the producing of various effects.

A potential theoretical unification is important because it allows a better understanding about what it means to endorse Meritocracy beliefs, as the two research lines mentioned earlier

show an interesting pattern: Meritocracy beliefs may have dual implications for intergroup relations. One implication is that Meritocracy beliefs can operate as *social equalizer*, allowing people to achieve higher status, or a social *justifier* meaning (e.g., Levy et al., 2006), acting as a SLB by offering a socially acceptable explanation that stabilizes existing status differences. Whether Meritocracy beliefs acts as an equalizer or justifier depends on their correspondence with the actual dynamics of the social system. When a system is truly meritocratic, stronger mobility beliefs may help galvanize efforts among appropriately motivated and capable individuals for social mobility. However, when a system is not meritocratic but people believe that it is a meritocracy, members of low status groups may be inclined to see their social position as legitimate and thus be accepting, while high status group members may infer low status groups as individually responsible for their disadvantage position in the social system (McCoy & Major, 2007; Rüsch, Bodenhausen, & Corrigan, 2010). The other, largely independent implication, is that Meritocracy beliefs can be descriptive, characterizing perceptions of the current social system, or prescriptive, providing a standard of what ought to be (Son Hing et al., 2011). For example, while descriptive Meritocracy -- the belief that Meritocracy exists -- is related to other legitimizing ideologies, such as political conservatism, racism, social dominance orientation, and right-wing authoritarianism, prescriptive Meritocracy -- the belief that Meritocracy should exist -- is argued to be unrelated to explicit and implicit negative attitudes toward low status groups (Son Hing et al., 2011).

In the following sections, we review how Meritocracy beliefs, traditionally construed as a central cultural value, has been increasingly associated with intolerance and dislike of members of low-status groups, and how this negative association can have systematic and important effects for intergroup relations. Following that, we briefly review prime paradigms used to activate a meritocratic worldview in experiments designed to test the impact of Meritocracy in a range of psychological and behavioral intergroup outcomes.

Meritocracy and Intergroup Attitudes and Behaviors

People in contemporary Western societies generally prefer to think of society as being meritocratic (Bobo & Hutchings, 1996; Kluegel & Smith, 1996). Most think of themselves and others as separate individuals, and hold the conviction that individual advancement is the way to

social equality (Ellmers & Barreto, 2009). As a result, Meritocracy beliefs are widely shared and largely stable. However, a meritocratic worldview may hold a downside.

Early work on values linked to intergroup attitudes suggested that beliefs associated with the idea that hard work leads to success may be associated with prejudice. For instance, the salience of work ethic values (*vs*. egalitarian) not only positively predicted prejudice toward Black people (Katz & Hass, 1988) but also predicted less favorable evaluations toward Black targets, particularly among highly meritocratic individuals (Biernat, Vescio, & Theno, 1996).

Furthermore, among high status groups, the more individuals believe that Meritocracy exists, the more likely are to endorse positive stereotypes (e.g., intelligent, hardworking) (Jost, 2001) and to deny White privilege (Phillips & Lowery, 2015). Conversely, believing that Meritocracy exists cause greater negative internal attributions for the relative disadvantage position of low status groups (Fraser & Kick, 2000; Haney & Hurtado, 1994) and greater negative stereotyping, particularly of women (McCoy & Major, 2007), Blacks and Mexican Americans (Ho et al., 2002).

More recently, research on the role of Meritocracy beliefs on intergroup behavior suggests that Meritocracy causes greater workplace discrimination toward women, in a managerial scenario with equally qualified candidates (Castilla & Bernard, 2010). Thus, if Meritocracy beliefs predicts status-based differentials, this may have significant implications in other socially relevant domains, such as social policies, or in educational and health domains. For instance, in an educational context, it might maintain the perpetuation of a lower status position by hindering access to higher levels of education or holding a perception of lower competence among young members of socially devalued groups.

Thus, we were interested in reviewing published and unpublished studies developed to experimentally test to what extent activating Meritocracy in people's minds results in less favorable outcomes, ranging from attitudes, evaluations, and behaviors toward LSG members.

Activation of the Meritocracy Concept

The ability to temporarily activate Meritocracy beliefs has been used by researchers investigating the causal role Meritocracy plays in intergroup processes. Thus, one way to activate Meritocracy is through tasks encoding cues that are relevant to the construct, providing temporarily

access to the mental content. Once the construct is activated in memory, it is likely to be used as a basis for subsequent judgments (Higgins, Rholes, & Jones, 1977; Srull & Wyer, 1979) and to influence behavior (Bargh, 1989). The activation or implicit *priming* tasks are currently under intense experimental scrutiny and controversy (Schimmack, Heene, & Kesavan, 2017) but the evidence does show that priming occurs, at least with some temporary influence (Weingarten, Chen, McAdams, Yi, Hepler, & Albarracín, 2016).

The implicit priming paradigm typically presents subjects with words related to the construct in a camouflaged manner (e.g., Srull & Wyer, 1979). In contrast, explicit priming paradigms present subjects with stimuli or instructions that are explicitly in association with cues that are relevant to the construct. This happens because individuals have explicit access to their beliefs system. In such paradigms, individuals typically read a brief article or are asked to report their level of endorsement of a given belief or attitude. This type of explicit priming paradigms increase the availability of the mental content (e.g., attitudes or beliefs) storage in memory, promoting the creation of cognitively consistent inferences (Bradburn, 1982; Schuman & Presser, 1981).

In one of the first studies attempting to temporarily activate Meritocracy beliefs, participants were exposed to an explicit prime, where they filled out a single scale, so that the scale would act as a prime (Katz & Hass, 1988). Since then, the way the prime is presented has diversified.

Currently, with the respect to the methodology, a concept can be primed directly or indirectly such that people may be aware or not the mental activation is connected to the prime. A prime can directly (explicitly) or indirectly (implicitly) activates Meritocracy beliefs and consequent attitudes, and people may be conscious of this activation (explicit impact) or unaware of the thoughts, feelings, beliefs, and attitudes that have been activated (implicit impact).

Typically, explicit primes range from asking directly to participants their level of agreement toward the construct (Chatard et al., 2006) to presenting explicit stimuli (e.g., a PWE speech; Quinn & Crocker, 1999). Consequently, this variety is reflected in the way the priming effectiveness is assessed. While some studies sought to measure the salience of Meritocracy (Redesdorff et al., 2016), other work has measured the extent to which subjects endorse Meritocracy beliefs (Castilla & Bernard, 2010; Darnon et al., 2018; Levy et al., 2016). Broadly, a manipulation check is a measure designed to "check whether the manipulation conducted in an

experiment is perceived by the subjects as the experimenter wishes it to be perceived" (p.108) (Morton & Williams, 2010). However, there is some variation in the way manipulation checks are measured.

Implicit measures, in turn, seek to activate indirectly the belief by making participants engage in a task where the concept is activated outside the individual's consciousness (Greenwald & Banaji, 1995). In such studies, participants are asked to perform a cognitive task, where they have to unscramble a set of 5 words into a 4-word meaningful sentence (McCoy & Major, 2007). In this case, the salience of Meritocracy beliefs is sought to occur when people temporarily view the world through the lens of this belief system, because it is storage in their minds. As a result, if the activation succeed is sought to be reflected in individual's endorsement of the belief in Meritocracy, in that primed individuals should express a higher agreement with the belief, compared to the control condition.

Thus, the heterogeneity described above both in the nature of the prime and in the forms that activation and the manipulation checks for it can assume, makes it challenging for researchers to ascertain the best content for Meritocracy activation and the best practices for implementing manipulation checks (Hauser, Ellsworth, & Gonzalez, 2018).

Previous research suggests that Meritocracy activation is contingent with self and group-interest motives (Cokley et al., 2007; Garcia et al., 2005), with the accuracy of information provided (Levy et al., 2006), and with the need to see the social system as fair and thus to justify inequality (Ledgerwood, Mandisodza, Jost, & Pohl, 2011). For example, there is work suggesting that the desire to justify the societal status quo leads individuals to defensive cognitive and behavioral processes to protect and bolster the notion that hard work leads to success in society. Furthermore, in the face of contradictory evidence that threatens the social system (i.e., success is the result of chance), the activation of Meritocracy increases the legitimacy of the social system (Ledgerwood et al., 2011). Although these studies matter to the literature on the antecedents of meritocratic beliefs, they lack clarity about (a) the conceptual dimensions that are being used to activate meritocratic beliefs, (b) the existing similarities and dissimilarities among the prime, and importantly (c) about whether prime is affecting the concept salience or endorsement.

Having these concerns in mind, this paper presents a systematic literature review about (a) the impact of Meritocracy on attitudinal and behavioral outcomes toward low status groups and (b) the prime used to experimentally test the effect of Meritocracy on intergroup outcomes.

Because of the diffuseness of the current literature in this area and the focus on the different types of approaches and assumptions made about Meritocracy across studies, we pursued a systematic review of the literature (and not a more focused meta-analysis of particular findings). Specifically, the goals of the current review are to: (a) summarize the content of the different prime tasks used in these studies; (b) summarize to what extent the prime succeeded at activating the socio-psychological construct, (c) summarize the research with Meritocracy priming on psychological and behavioral outcomes for low status groups.

Method

Search strategy

For this systematic search, conducted in 2018, we developed a search strategy using a combination of PICOS and SPIDER tool (Cooke et al., 2009). This search strategy was tailored to four databases: Scopus, PsycINFO, EBSCO, Web of Science, and the search terms used were the following: Meritocr* OR ideology OR “system justification theory” OR “social mobility” OR “Protestant work Ethic” OR individualism OR “belief in a just world” OR authoritarianism) AND “racial attitudes” OR “social attitudes” OR “political attitudes” OR “implicit attitudes” OR evaluation OR belief OR perception OR "decision making" OR “behavioral intentions”. All searches spanned from database inception until 2018, included journal articles and academic dissertations (Master’s and Ph.D.), published in English, Spanish, French, and Portuguese. Beyond database search, we used direct-to-researcher channels (e.g., servers list), as recommended by Cooper, Hedges and Valentine (2009).

Selection Criteria

The selection criteria were based on the PRISMA Statement (Moher et al., 2009). The phenomena of interest in the criteria of inclusion included any experiment using Meritocracy as an independent variable and any outcome on explicit and/or implicit attitudes, racial, social and political evaluations, perceptions, beliefs, and decision-making involving members of low status groups.

At the initial screening stage, two reviewers judged the title and abstracts against the inclusion criteria. Both reviewers read the title and abstract and applied the inclusion/exclusion criteria from the screening form to make a decision on whether or not to include the study in the review. The decision for inclusion *vs*. exclusion on the study was recorded in a screening form (i.e. Screening Titles and Abstracts online form). If the title and the abstract met the inclusion criteria then the full-text copies of all studies were retrieved for the next screening level.

At the second level of screening, two authors reviewed the full-text articles independently for the relevance of research aim. A web-based software was used to partially automate the screening process (Covidence, systematic review software). Any disagreements were resolved via discussion.

Eighty-eight empirical articles were assessed for full-text eligibility. 65 out of the 88 articles were excluded because were correlational (N=23), did not experimentally manipulate any Meritocracy -based construct (N=16), did not measure attitudes or decisions toward low status groups (N=11), were not quantitative (i.e. systematic/literature reviews, case studies; N=8), were conference proceedings, newspapers articles (N=6) and one was not available (N=1).

Thus, a total of 23 articles were identified that met the inclusion criteria. A PRISMA flow diagram (Figure 1) summarizes the information on the phases of the systematic review process.

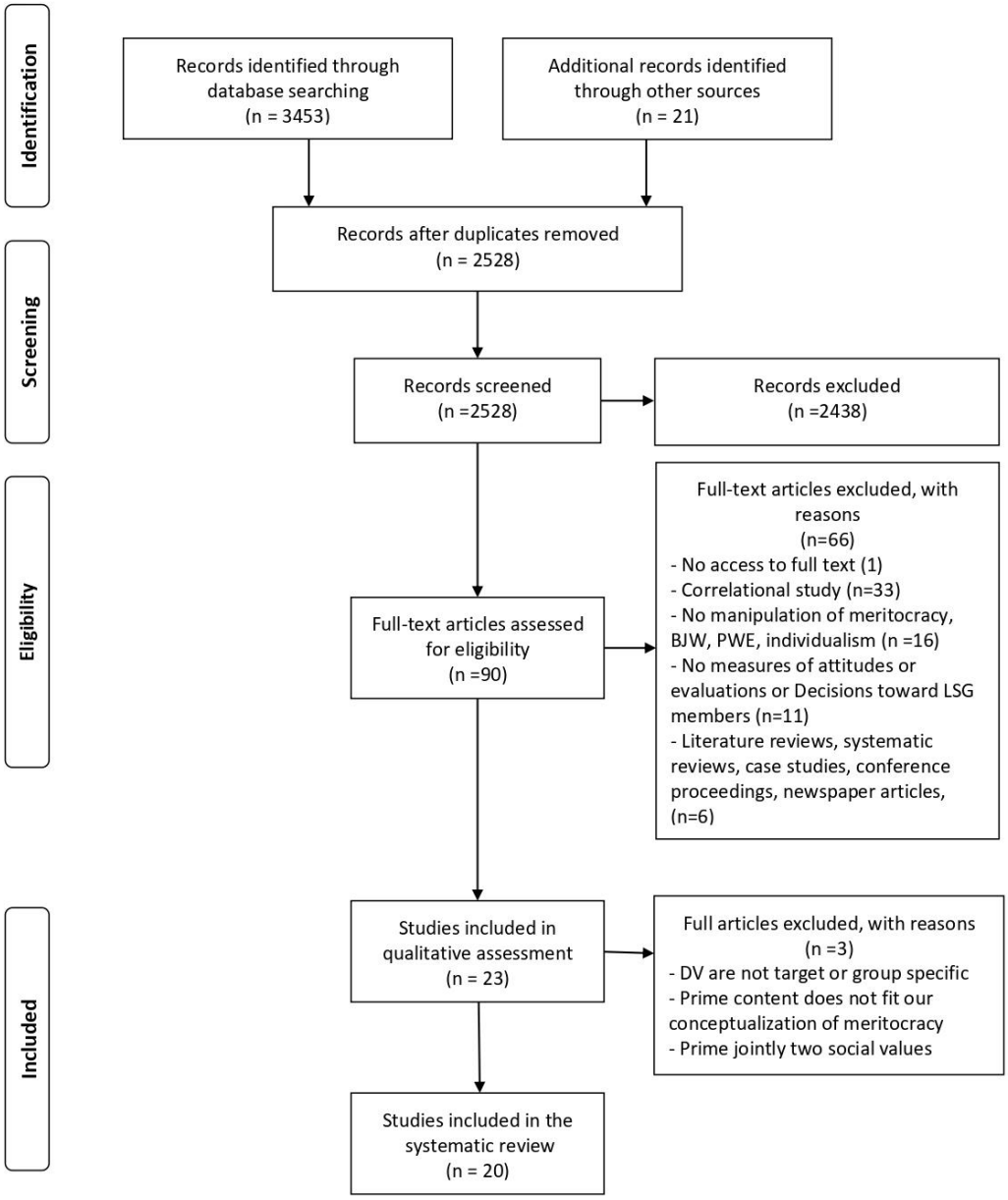

Figure 1. PRISMA flowchart of study selection.

Quality Assessment

To assess the quality of the articles we created a coding sheet attempted to assess the likely internal, construct and statistical validity of the inferences arising from the studies. We approach this aspect of the review creating a coding sheet based in the framework provided by Valentine and Cooper (2008). The coding sheet included characteristics at the study level and at the outcome level; addressed the internal validity (e.g., to what extent the procedure permits an ambiguous

conclusion about the experimental manipulation effectiveness), construct validity (e.g., to what extent participants were treated and the outcomes measured in a way that is consistent with the definition of the paradigm and its proposed effects), and statistical validity (e.g., to what extent accurate estimates could be derived from the study report) (see Table S3).

Data Extraction

In the data extraction phase, 20 articles were selected and the characteristics extracted were:

1. Characteristics of study and participants: total sample size; the number of participants per group; mean age and standard deviation; participant's sex; the number of experimental and control groups; the number of independent variables, type of design.

2. Characteristics of the outcome measures: assessment (implicit or explicit); dimension (perceptual; attitudinal; behavioral); toward the self or others; source (original or adapted).

3. Characteristics of experimental manipulation: experimental group content (e.g., Meritocracy, PWE, social mobility); control group content, source of the manipulation (original or adapted).

4. Estimation of effect sizes: number of participants per group, descriptive statistics (mean and standard deviations for each group), and student's *t*, when M and *SD* and *N* per group were not fully reported.

Data Analysis

Prime Content. Prime description and dimensions of Meritocracy were identified in each study. Using a Likert scale, from 1 = Not at All to 4 = Fully, three authors analyzed to what extent the four conceptual dimensions were reflected in the prime: two personal dimensions (e.g.,, effort and internal control) and two structural dimensions (e.g., social mobility and equal opportunities). As to the two personal components, *Effort* reflects the idea that societal rewards are based on effort and ability and *internal control* reflects the idea that people have control over their own success and failures. As to the structural components, *social mobility* reflects the idea that people can achieve success and *equal opportunities* reflect the idea that society/organizations provide equal opportunities for all.

Calculating the Effect Size

Prime Effectiveness. For studies reporting a sample size per group, mean and standard deviation, we used a spreadsheet to estimate the size of the effect of each measure (Lakens, 2013). We calculated the effect sizes using Cohen's *d* (Cohen, 1988).

Intergroup Outcomes. Studies with a single experimental factor and a single continuous outcome variable reporting sufficient information, effect sizes for the Meritocracy were calculated by subtracting the control group mean from the experimental condition (i.e. Meritocracy) group mean and dividing the result by the pooled standard deviation. Studies with a single experimental factor and two continuous outcome variables (e.g., low status and high-status means) reporting sufficient information, Effect sizes for social status were calculated by subtracting the high status mean from the low status mean and dividing the result by the pooled standard deviation, at each level of the experimental factor. Studies with two experimental factors and a single continuous outcome variable reporting sufficient information, effect sizes were calculated by subtracting the control group mean from the experimental condition (i.e. Meritocracy) group mean and dividing the result by the pooled standard deviation, at each level of the second experimental factor.

Results

Study Selection and characteristics

Of the 32 selected experiments, the majority are published manuscripts, including 27 journal articles, one working paper and one chapter. The remaining three are unpublished manuscripts (e.g., master and doctoral thesis). The research on the topic of Meritocracy had focused extensively on the United States, while the remaining research is distributed among France (N=2), the Netherlands (N=2), and Portugal (N=3). Thirteen experiments were conducted within an applied field. The majority were conducted in an organizational context (e.g., Castilla & Bernard, 2010), one study took place in the educational context (Darnon et al., 2018), two others were aggregated

into a health-related domain (Newsom, 2014; Quinn & Crocker, 1999), two experiments were conducted within moral dilemmas scenarios (Moreira, 2016) and one in a social domain (Levy et al,, 2006). The remainder experiments were unspecified domain-wise.

Participants were reportedly surveyed in the Lab (N=11), online (N=9), or in the classroom/at campus/school (N=6), and one in the street; the remainder (N=5) did not report where the experiment was carried out. The majority of the samples consisted of adults (N=30). All studies used an experimental design, where 27 were between-subjects and 5 a mixed design.

A large portion of studies involve a female target (N=13), immigrants (N=3), socioeconomic status (N=3), ethno-racial groups (N=3), one addresses mental illness stigma.

Manipulation characteristics

Of the 32 manipulations, 21 used an explicit prime (e.g., reading a text; completing a scale) and 11 use an implicit prime task (e.g., unscrambling words). A large portion of primes reported Meritocracy (N=20) as the theoretical construct, while six studies report Protestant Work Ethic and three report perceptions of success or social mobility. A single prime uses levels of prescriptive Meritocracy (moderated *vs*. high) and one prime reported a mixed procedure combining two tasks – one as Meritocracy and the other as PWE.

Synthesized findings

Meritocracy Activation

A detailed overview of the Meritocracy Activation (MA) is depicted in Table S1. Five multi-experiments present an original prime aiming to activate aspects of the Meritocracy construct (Castilla & Bernard, 2010;; Chatard et al., 2006; Darnon et al., 2018; McCoy & Major, 2007; Pereira, Vala, & Leyens, 2009; Redesrdorff, et al., 2016), four primes focused on Protestant Work Ethic (Berniat et al, 1996; Katz & Hass, 1988; Levy et al., 2006; Quinn & Crocker, 1999) and two primes focused on perceptions of success and social mobility (Ho et al, 2002; Ryan et al., 2012). The remaining used either the same and modified version of the original or one of the primes mentioned above.

Within Meritocracy construct, all incorporate, to a large extent, the effort/hard work and internal control dimension of the value. Additionally, a few captures, to a large extent, the social mobility aspect (e.g., McCoy et al., 2007).

Within the PWE construct, all focus the effort and hard work aspect of this value. Additionally, three of them capture, to some extent, the *internal control* aspect (Biernat et al., 1996; Katz & Hass, 1988; Quinn & Crocker, 1999).

As expected within the social mobility construct, the studies focus specifically on this structural component of Meritocracy ideology. A prime focused on social mobility beliefs, associated with tokenism (Ryan et al., 2012). Another prime aiming to manipulate perceptions of success and social mobility presented a video of a program showing several award winners' bleak beginnings, the obstacles that they had to overcome, and the qualities that they possessed that enabled them to succeed, therefore capturing the idea of hard work and internal control alongside the idea that anyone can move upward in the social ladder (Ho et al., 2002, *study 1*).

The majority of the tasks uses explicit Meritocracy prime. The explicit activation of Meritocracy is made via reading a company's core values (Castilla & Bernard, 2010; Thompson, 2015), filling out a questionnaire (Chatard et al., 2006), via a comprehension text task (Costa-Lopes et al., 2017 study 1; Pereira et al., 2009) or via a task where participants are instructed to put six events of meritorious people on a historic timeline ranging from 1900 to 2013 (Redersdorff et al., 2016). The explicit activation of PWE is made via reading a political speech (Quinn & Crocker, 1999; Newson, 2014) or reading a newspaper report concluding that 'people who work hard do well and have a successful life' (Levy et al., 2006) or listening to a audiotaped speech (Biernat et al., 1996).

A subtle prime consists of using a scrambled sentence task to prime Meritocracy (McCoy et al., 2007). Studies using this type of prime share the same procedure: participants are given 5 min to unscramble 20 sets of 5 words into 4-word sentences. The prime sentences focus mainly on two aspects of the Meritocracy value - the idea that societal rewards are based on effort and ability (e.g., "Effort leads to prosperity") and on the idea that people have control over their own success and failures (e.g., "responsible people get ahead"). And, to some extent, the prime focuses on the "social mobility" belief ("earn a good living").

Priming Effectiveness

Of the total of studies, 17 do not have a prime manipulation check, 2 use a measure of how much the concept is salient (Redesdorff et al., 2016; Thomson, 2015), 2 studies include a measure to quantify how much the concept was applied in a subsequent outcome (Pereira et al., 2009; Biernat et al., 1996, study 2), and one study included a measure of the powerfulness of the concept. The remaining allow the estimation of prime affecting the concept endorsement, thus a meta-analytic review was undertaken only for a subset of 5 studies.

Meritocracy Prime. As depicted in Figure 2, five studies provided data for meta-analysis, including three using an explicit prime (Castilla et al., 2010; Chatard et al., 2006; Darnon et al., 2018) and two studies use the same implicit prime, yet reporting different measures for assessing its effectiveness (Laurin et al., 201; McCoy & Major, 2007). Combining results, it is possible to see a moderate effect size of the treatment group more affecting the endorsement of Meritocracy (d = 0.48; 95% ICC, 0.27; 0.64). Furthermore, the variability between explicit and implicit prime was low, (I^2 = 0). However, for the remaining Meritocracy primes (N= 17), effect sizes were not possible to estimate, suggesting that the meta-analyses results might have a high risk of bias.

Protestant Ethic Work Prime. Studies assessing a prime manipulation check vary in terms of the outcome of interest. Among those who reported an MC, in three studies PWE scale was used as a prime MC, while two use other forms of checking (e.g.,, (1) to give an opinion on how to cut funding on two minority status organizations *vs* .academic honors societies, and (2) to rate the powerfulness of the ideology prime).

Only in one of the three studies using PWE scale as a prime MC, participants strongly endorsed PWE to a greater extent than did participants in the control group (Levy et al., 2006, study 2). In the remaining two, PWE endorsement was not affected by the priming task (Levy et al., 2006, study 3; Newsom, 2004).

Economic Success and Social Mobility Prime. Participants who were primed solely with the perception of economic success or primed about the economic success of a specific group (e.g.,

Asian Americans) perceived opportunity and social mobility in the United States to be significantly greater than participants in the control group (Ho et al., 2002).

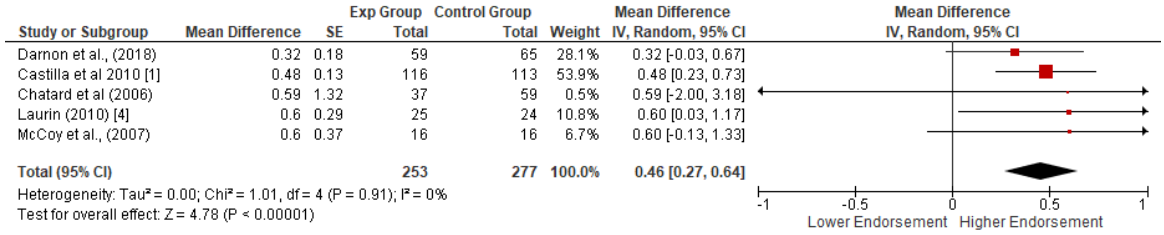

Figure 2. Forest Plot of comparison: Experimental *vs.* Control group, outcome: Meritocracy endorsement

Table 1. Summary of Study Characteristics and Construct Salience (MS) Results and Effect Sizes

Study	Sample	Manipulation group	Control Group	Second IV	DV	Results	Effect size, (95% CI)
Meritocracy							
Castilla et al., (2010) [1]	♀ (64) ♂ (163) M_{age} = 29.71 (3.89)	Meritocracy - based evaluation	regularity of evaluation	None	Meritocracy	> endorsement of Meritocracy in the Meritocracy condition, vs. . control	0.35 [.09,.61]
Chatard et al., (2006)	♀ (24) ♂ (31) M_{age} = 39.17 (NR)	"Moderated" Meritocracy	"Radical" Meritocracy	Positive Discrimination (equivalent level vs. minimum required vs. unconditional preference)	Meritocracy	> endorsement of Meritocracy in the moderated merit condition condition, vs. . radical merit condition.	0.69 [.22, 1.16]
Darnon et al., (2018)	♀ (80) ♂ (66) 3(unspecified) M_{age} = 10.13 (.51)	Meritocracy	Neutral text about frogs' ability to anticipate disasters	None	Belief School Meritocracy	> of Meritocracy in the Meritocracy condition, vs. . control condition	0.42 [.06, .78]
McCoy et al., (2007) [pilot study]	♀ (13) ♂ (19) M_{age} =19.56 (1.58)	Meritocracy	Neutral		Individual Mobility	> of social mobility in the Meritocracy condition, vs. . control condition.	0.77 [.05, 1.49]
Laurin et al (2011)	♀ (67) ♂ (24) M_{age} = 18.8 (NR)	Meritocracy	Neutral	None	Societal fairness beliefs	> fairness societal belief in the Meritocracy	0.65 [.08, 1.23]

Redesdorff et al., (2016) Pilot study	♀ (34) M_{age} = 32.32 (6.29)	Meritocracy	Social Equality	group composition (all male vs. gender-balanced)	Number of identified merit-related words.	condition than control condition > percentage of words related to Meritocracy identified in the Meritocracy cond vs. . social equality cond.	*Not estimable*
Thomson et al., (2015) Pilot study	♀ (37) ♂ (17) M_{age} = 24.3 (NR)	Meritocracy	Seniority	None	Correct identification of the compensation system as "merit-pay" or a "seniority-based pay".	25/ 27 identified correctly the Company's Core values as meritocratic in the Meritocracy condition. 18/25 identified correctly the Company's Core values as non-meritocratic in the control condition.	*Not estimable*
Pereira et al (2009)	80 ♀ (49%) ♂ (51%)	Meritocracy + Protestant Work Ethic (Katz & Hass, 1988)	Egalitarianism + Egalitarianism (Katz & Hass, 1988)	humanity: humanization vs. . infra-humanization	Grades difference in the evaluation of two students solving a math's problem; higher scores indicated greater application of the meritocratic norm compared to the egalitarian norm.	> Application of the meritocratic norm in the meritocratic norm condition than in the egalitarian condition.	0.35 [-.09,.80]
Protestant Work Ethic							
Levy et al., (2006) [2]	Older group: ♀ (130) ♂ (39) (M_{age}=21.31). middle group: ♀ (106) ♂ (49) (M_{age} = 14.99). youngest group: ♀ (40) ♂ 41 40 females; M_{age} = 10.80).	Protestant Work Ethic	Anti - Protestant Work Ethic		Protestant Ethic Work	> endorsement of PWE in the Pro – PWE condition	Older, Cohen's *d* = 0.75 Middle, Cohen's *d* = 0.73 Youngest, Cohen's *d* = 1.37

Levy et al., (2006) [3]	♀ (63) ♂ (72) (M_{age} = 21.45).	Protestant Work Ethic	No task	task instructions: Justification vs. Definition	Protestant Ethic Work	= level of Meritocracy endorsement in the Meritocracy justification (*vs.* . definition Condition)	PWE 0.04 [-.45, .53]	No Task *No estimable*
Newsom et al., (2004)	♀ (201) ♂ (71) M_{age} not reported	Protestant Work Ethic Message	Inclusive Message		Protestant Ethic Work	= level of PWE endorsement across both cond.	0.13 [-.11, .37]	
Biernat et al., (1996) [2]	185 White *Sex and age unreported*.	Protestant Work Ethic Speech	Egalitarianism Speech	value: violation *vs.* support	Opinion on how to cut funding on two minority status organizations *vs.* academic honors societies.	For minority org: > funding cut on the PWE (vs. EG cond) Honors society: = funding cut	Minority org, Cohen's *d* = 0.29 Honors society: *Not estimable*	
Quinn & Crocker (1999)	♀ (118) Normal weight (6) Overweight (59)	Protestant Work Ethic Message	Inclusive Message	all participants read a text about social devaluation of being overweight	one-sentence summary of the prime; powerfulness of the ideology primes; political orientation.	= level of powerfulness in the Protestant ethic and the message and the inclusive. No differences in polit. orientat measure	*Not estimable*	
Ho et al (2002) [1]	97 participants *Sex and age unreported*.	Perceived Economic Success	CG 1 - Animal Video Control condition CG 2 - No Video Control condition	None	Opportunity and Social Mobility in the US	> belief in Social Mobility in the US in the economic success condition (*vs.* Control)	0.44 [.04, .84]	
Ho et al (2002) [2]	43 participants *Sex and age unreported*.	description of the "success" of Asian Americans	No description of the "success" of Asian Americans	None	Opportunity and Social Mobility in the US	> belief in Social Mobility in the US in the description success condition (*vs.* Control)	Hedges *g*s = 0.43	
Ryan et al (2012)	♀ (137) ♂ (96) M_{age} not reported	High Social Mobility	Low Social Mobility	Group gender composition: all male vs. balanced composition	subjective tokenism:		*Not reported*[1] .	

Impact of Meritocracy Prime on Outcomes toward Low Status Groups

Does Meritocracy predict less favorable Intergroup Attitudes?

Explicit and Implicit Prejudice. The results presented in Table 2 show that priming participants with Meritocracy or PWE increases levels of both implicit prejudice toward

immigrants (Costa – Lopes et al., 2017) and explicit racial prejudice and decreases levels of positive racial attitudes (Katz & Hass, 1988). Interestingly, priming participants with prescriptive *moderated* Meritocracy increased levels of negative attitudes toward women (e.g., sexism) compared to priming participants with prescriptive *radical* Meritocracy (Chatard et al., 2006).

Stereotyping. Low status groups such as African Americans and Mexicans were portrayed less favorably in the prime condition, than in the control conditions. Specifically, participants in the prime condition were more willing to infer negative internal attributions for African and Mexican Americans, by agreeing that often they lack the values that are needed for social advancement or that many lack the motivation or willpower that is necessary for economic success (Ho et al., 2002).

Does Meritocracy predict opposition to equality between groups?

Egalitarianism. As seen in Table 3, levels of Egalitarianism were found to decrease after the PWE prime, but only in participants who were instructed to use PWE as an *argument* to justify socioeconomic status quo inequality, as opposed to thinking about the *meaning* of PWE (Levy et al., 2006, *study 3*). Moreover, PWE effects on egalitarianism endorsement were found to be moderated by age. While in children aging 10-12 years and 14-16 years old levels of Egalitarianism increased in the PWE-prime condition (*vs*. control), among young adults (18-25 years) levels of Egalitarianism were found to decrease after the PWE prime (Levy et al., 2006, *study 2*).

Opposition to Positive Discrimination Policies. Opposition to Affirmative Action policies increased in the Meritocracy condition compared to control, along with a higher endorsement of Anti-White bias beliefs (e.g., the idea that efforts to reduce discrimination against minorities have led to increased discrimination against White people; Wellman, Liu, & Wilkins, 2016). Another study found that opposition to Affirmative Action policies in the workplace varies as a function of the level of prescriptive Meritocracy and the type of policy (Chatard et al., 2006). Specifically, participants in the strong Meritocracy prime (*vs*. moderate Meritocracy prime) were more in favor of a positive discrimination policy when the policy was to hire a female candidate when (a) both female and male candidate have the same level of qualification or (b) when female's

qualifications meet the minimum required for the position. No differences between strong *vs*. moderate prime conditions were found for the unconditional preference policy (e.g., the female candidate should be preferred.)

Table 2. Summary of studies related with the Impact of Meritocracy on Attitudes, Beliefs and Perceptions involving Low status groups

Study	Prime Construct	Outcome	Results	Effect size, (95% CI)
Chatard et al., (2006)	Meritocracy	Sexism	Participants in the moderated Meritocracy prime scored higher than participants in the radical Meritocracy prime.	d_s = 0.60 [.04, 1.16]
Costa-Lopes (2017) [1]	Meritocracy	Implicit Attitudes	Participants in the Meritocracy prime scored higher than participants in the control condition.	d_s = 0.61 [-0.03, 1.24]
Costa-Lopes (2017) [2]	Meritocracy	Implicit Attitudes	Individuals' level of implicit prejudice at Time 2 increased in the Meritocracy prime, but not in the control group.	$d_{z\ Meritocracy}$ = 0.55 $d_{z\ control}$ = -0.02
Katz & Hass (1988)	PWE	Pro-Black Attitudes	Participants in the PWE prime score lower than participants in the Egalitarianism prime.	d_s = -0.52 [-1.16, 0.12]
		Anti-Black Attitudes	Participants in the PWE prime score higher than participants in the Egalitarianism prime.	d_s = 0.76 [0.11, 1.42]
Ho et al (2002) [1]	Meritocracy + Economic Success	Negative Stereotypes toward Blacks	Participants in the prime condition score higher than participants in the control condition.	d_s = 0.40 [.00, 0.80]
		Perceived Racial discrimination	Participants in the prime condition do not perceive significantly less racial discrimination than participants in the control condition.	*Not Estimable*
Ho et al (2002) [2]	Intergroup comparison of Perceived Success	Negative Stereotypes toward Mexicans	Participants in the prime condition score higher than participants in the control condition.	d_s = 0.75 [0.12, 1.38]
		Internal Attributions for the low status position	Participants in the prime condition score higher than participants in the control condition.	d_s = 0.68 [.05; 1.30]
		Attributions of lower status position	Participants in the prime condition score higher than participants in the control condition.	d_s = 0.64 [.02, 1.26]
		Perceived Racial discrimination	Participants in the prime condition do not perceive significantly less racial discrimination than participants in the control condition.	*Not Estimable*
Pereira et al (2009)	Meritocracy	Discrimination: opposition to Turkish Adhesion to EU	Participants in the Meritocracy prime show a higher opposition than participants in the control condition.	d_s = 0.39 [-0.23, 1.02]

Table 3.Summary of studies related with the Impact of Meritocracy and Equality between groups

Study	Prime	Target	Outcome	Moderator	Results	Effect Sizes	
						Prime	**Control**
Chatard et al (2006)	Meritocracy	F	Support for AA	Type of Positive Discrimination Policy (equivalent level vs. minimum required vs. unconditional preference)	In the equivalent level recruitment policy, participants in the strong Meritocracy prime, were less oppose to affirmative action, than participants in the moderate Meritocracy prime. In the minimum required policy, participants in the strong Meritocracy prime, were less oppose to affirmative action, than participants in the moderate Meritocracy prime. In the unconditional preference policy, participants were oppose to the affirmative action. Participants in the strong Meritocracy prime, were strongly more oppose to this affirmative action policy, than participants in the moderate Meritocracy prime.	*Not Estimable*	
Levy et al (2006) [2]	PWE	None	Egalitarianism	Age	**10-12 yrs.** Participants in the prime condition reported higher levels of egalitarianism than	d_s = .52	

					participant in the control condition	
					14-16 yrs. Participants in the prime condition reported higher levels of egalitarianism than participant in the control condition	d_s = .43
					18-25 yrs. Participants in the prime condition reported lower levels of egalitarianism than participant in the control condition	d_s = - .34
Levy et al (2006) [3]	PWE	None	Egalitarianism	Task instructions: Justification vs. Definition	Participants in the PWE-Justification group reported lower levels of egalitarianism than participant in the PWE-definition group.	d_s = 0.77
Wellman et al (2016)	Meritocracy	None	Support for AA	*None*	Participants in the Meritocracy prime show less support for Affirmative actions compared to the control condition.	d_s = - 0.35 [0.71, .01]
			Zero-Sum Beliefs		Participants in the Meritocracy prime endorse zero-sum beliefs more compared to the control condition.	d_s = 0.37 [.01, .73]

Does priming Meritocracy beliefs lead people to make concessions as a function of the a) source or b) the target of the discrimination?

Priming the Locus of Causality of the discriminated Low-Status target. As described in Table 5, two studies found that when the discriminatory behavior is attributed to discrimination, female participants exposed to the prime (*vs.* control condition), perceived less prejudice against the female candidate, endorsed gender stereotypes to a significantly higher degree (McCoy &

Major, 2007) and judged the female target as less competent (Redesdorff et al., 2016). Interestingly, when the discriminatory behavior is attributed to internal factors (e.g., less competence), the discriminated female target is seen as more competent in the prime condition (*vs*. control condition), and is held equally responsible for the negative outcome across the two conditions (i.e., social equality and Meritocracy).

Moreover, female participants in the Meritocracy condition perceived the victim as more responsible when the negative outcome was attributed to her abilities and not to sexism. However, in the control condition, the same pattern did not occur, as the victim was perceived equally accountable, regardless of the locus of causality presented to female participants (Redesdorff et al., 2016).

Priming discrimination against a High-Status target. Two studies found that exposing participants to Anti-male Bias predicts differentials for a low and high-status target. Perceiving Anti-male Bias in the prime condition (*vs.* control) increases positive evaluations and helping intentions toward a White male target (Wilkins, Wellman, & Kaiser, 2013). Interestingly, the opposite effect happens when the target is female: perceiving Anti-male Bias in the prime condition (*vs.* control) decreases positive evaluations and helping intentions toward a female target (Wilkins, Wellman, Flavin, & Manrique, 2017).

Does Meritocracy beliefs predict less favorable Evaluations of low-status targets?

Competence. The relationship between the prime and perceptions of low-status targets' competence was found to be moderated by individuals' levels of PWE. One study shows that, when PWE is high, the Black Target is judged as less competent that the White target in the prime condition. While when PWE is low, the Black target is judged as equally competent as the White target in the prime condition (Biernat et al., 1996; *see* Table 4). In another study, the evaluation of the low-status target (e.g., female target) competence was found to be moderated by the causality (sexism *vs*. internal attributions) of discriminatory behavior in the workplace. When the discriminatory behavior is attributed to sexism, the discriminated female target is judged less competent in the prime condition (*vs*. social equality condition). Surprisingly, when the discriminatory behavior is internally attributed (e.g., less ability), the discriminated female target is more competent in the prime condition (*vs*. social equality condition) (Redersdorff et al., 2016).

Social Distance. The relationship between the prime and social distance is moderated by individual's levels of PWE. When PWE is high, after being exposed to the PWE- prime condition, the Black Target is judged less favorably (*vs.* White target). In contrast, when PWE is low, there are no significant status-based differences in the prime condition (Biernat et al., 1996)

Same-Gender Professional Evaluation. Gender team composition was found to moderate the relationship between gender, prime and ingroup evaluations. In groups composed only by males, female participants after being exposed to the high social mobility condition (*vs.* low social mobility) were more likely to favor the female target (*see* Table 5). In contrast, in a gender-balanced group, female participants after being exposed to the high social mobility condition (*vs.* low social mobility) were less likely to favor the female target. A different pattern was found for men. In all-male group composition, male participants, after being exposed to the high social mobility condition (*vs.* low social mobility) were less likely to favor the male target. In the gender-balanced group, male participants after being exposed to the high social mobility condition (*vs.* low social mobility) were more likely to favor the male target (Ryan et al., 2012).

Table 4. Summary of studies related with Moderators of the relationship between Meritocracy and Intergroup Attitudes and Behaviors

Study	**Prime**	**Target**	**Outcome**	**Moderator 2**	**Moderator 3**	**Results**	**Effect Sizes**	
							Prime	**Control**
Biernat et al (1996)	PWE	Black	Competence	Target status	High PWE Endorsement	When PWE is high, the Black Target is judge as less competent that White target in the prime condition. When PWE is high, the Black Target is judge as equally competent that the White target in the	*Not Estimable*	

			egalitarian condition.	
		Low PWE Endorsement	When PWE is low, the Black Target is judge as equally competent that White target in the prime condition. When PWE is low, the Black Target is judge more competent that White target in the egalitarian condition.	*Not Estimable*
	Social Distance	high PWE Endorsement	When PWE is high, in the prime condition the Black Target is judge less favorably than White target. When PWE is high, in the egalitarian condition there's no differences between targets	*Not Estimable*
		Low PWE Endorsement	When PWE is low, in the prime condition there's no differences between targets. When PWE is low, in the egalitarian condition the Black Target is judge more favorably	*Not Estimable*

						than White target.		
Manipulation of Meritocracy as a justifier belief								
Levy et al.,, 2006 [4]	PWE	H	Monetary donation	Task instructions: Justification vs. Definition		Prime Condition. Participants in the , justification-condition participants donated significantly less money than definition-condition participants Control Condition. The definition and control conditions did not significantly differ from one another.	d_s =-0.62 [-1.05,-.20]	d_s =0.14 [-.28, .57]
Manipulation of Gender team Composition								
Ryan et al., (2012)	M	F & M	Social support	Male participant – Male Candidate	All-male Composition vs. Balanced Composition	Prime Condition. No differences between all-male and balanced composition. Control Condition. Less social support in all-male composition.	d_s =0.10 [-.62, .83]	d_s =-0.39 [-1.17,0.38]
				Female participant – Female Candidate	All-male Composition vs. Balanced Composition	Prime Condition. No differences between all-male and balanced composition.	d_s =-0.25 [-.80 ,.31]	d_s = -0.52 [-1.08,.04]

						Control Condition. Less social support in all-male composition. Prime Condition. No differences between all-male and balanced composition.		
			Professional Evaluation	Male participant – Male Candidate	All-male Composition vs. Balanced Composition	Control Condition. Higher positive evaluation in all-male composition. Prime Condition. Higher positive evaluation in all-male composition.	d_s = 0.03 [-0.69,.75]	d_s =1.02 [.22,1.82]
				Female participant – Female Candidate	All-male Composition vs. Balanced Composition	Control Condition. No differences between all-male and balanced composition.	d_s = 0.59 [.02, 1.16]	d_s = -0.17 [-0.72, .39]
Manipulation of Discrimination - High Status (i.e. White male) discriminated target								
Wilkins et al., (2013)	M	White Male	Positive Evaluations	Anti-White Bias Claim vs. No Claim		When exposed to claim of anti-male bias, the high status target is evaluated more positively in the prime condition than in the	d_s = 0.52 [.19, .86]	d_s = -0.35 [-0.69, -.02]

					control condition.		
					When exposed to no claim, the high status target is evaluated less positively in the prime condition than in the control condition.		
			Helping intentions		When exposed to claim of anti-male bias, the intentions of helping the discriminated high status target are higher in the prime condition than in the control condition.	d_s = 0.50 [.17, .83]	d_s = -0.16 [-0.49, -.17]
			Target Evaluation		When exposed to claim of anti-male bias, the discriminated low status target evaluated more positively in the prime condition than in the control condition.	d_s = -0.97 [-1.49, -.44]	d_s = -0.16 [-.60, .28]
Wilkins et al., (2017)	M	White Female		All participants were expose to Anti-White Bias Claim			
			Helping intentions		When exposed to claim of anti-male bias, the intentions of helping the	d_s = -0.70 [-1.21, -.18]	d_s = 0.01 [-0.43, .45]

					discriminated low status target are higher in the prime condition than in the control condition.		
Manipulation of Locus of Causality - Low Status (i.e. Female) discriminated target							
			Perceived Discriminatio n		When the discriminator y behavior is attributed to Sexism, participants in the prime condition, perceived prejudice against the female candidate to a significantly lower degree than in the control condition.	d_s = -3.50 [- 4.90, - 2.11]	d_s = -0.11 [-.99, .77]
McCoy & Major (2007) [2]	M	F		Attribution to: Sexism vs. Control	In the control condition, there are no differences between prime and control condition.		
			Stereotypes Endorsement		When the discriminator y behavior is attributed to Sexism, participants in the prime condition endorse gender stereotypes to a significantly higher degree than in the	d_s = 2.52 [1.35, 3.69]	d_s = 0.12 [-0.76, 1.00]

					control condition. Control Condition. No differences between prime and control condition.		
				Positive Discrimination (equivalent level vs. minimum required vs. unconditional preference)	When the discriminatory behavior is attributed to Sexism, the discriminated female target is judged less competent in the prime condition in the social equality condition.		
Redersdorff et al., 2016 [2]	M	F	Perception of Competence		When the discriminatory behavior is internally attributed (e.g., less ability), the discriminated female target is more competent in the prime condition, than in the control condition.	d_s = -0.84 [-1.26, -.41]	d_s = 1.60 [1.13, 2.07]
			Personal Accountability		When the discriminatory behavior is attributed to Sexism, the discriminated female target is held less personal responsible in the prime condition	d_s = -3.35 [- 3.99, -2.7]	d_s = 0.08 [-.33, .49]

		than in the social equality condition. When the discriminatory behavior is internally attributed (e.g., less ability), the discriminated female target is held equality responsible across the two conditions.

Does Meritocracy predict less favorable self-evaluations, internal attributions, and poorer performance?

Table 5 shows that priming Meritocracy increases negative self-evaluations, internal negative attributions and decreases school performance in low-status and stigmatized group members.

Self-evaluations. When primed with Meritocracy, overweight women showed lower psychological well-being as well as lower self-esteem than overweight women in the control condition. Normal weight women did not show significant differences in psychological well-being or self-esteem between conditions (Quinn & Crocker, 1999).

School Performance. In an educational context, primed low socioeconomic students (SES) performed significantly lower in a French and Math performance test than high socioeconomic students, compared to low and high socioeconomic students in the control condition (Darnon et al., 2018). In the prime condition, low SES students did not show significantly lower self-efficacy than high SES students, compared to the control condition.

Locus of Causality. Women primed with Meritocracy were more likely to make internal attributions for the rejection (e.g., blame themselves) than to blame it on discrimination, while in the control conditions women were not more likely to blame themselves than they were to blame discrimination. In contrast, men primed with Meritocracy were not more likely to blame

themselves than they were to blame discrimination. Interestingly, men in the control condition show an opposite pattern: they were more likely to make internal attributions for the rejection (e.g., blame themselves) than to blame it on discrimination (McCoy & Major, 2007; study 1).

Table 5. *Summary of studies related with the Impact of Meritocracy on Self – Evaluations and Performance*

Study	**Outcome**	**VI 1**	**VI 2**	**Results**	**Effect size**	
					Prime	**Control**
Quinn & Crocker (1999)	Psychological Well being	Overweight		Overweight women in the prime condition show lower scores than overweight women in the control condition.	*Not Estimable*[1]	
		Normal Weight		Prime did not predict differences in PWB.		
		Overweight		Overweight women in the prime condition show lower scores than overweight women in the control condition.		
	Self-esteem	Normal Weight		Prime did not predict differences in SE.		
Darnon et al., (2018)	School performance	Low SES vs. High SES		In the prime condition performance was significantly lower for Low SES students than high SES students, compared to control condition.	d_s = -4.43 [-5.38, -3.48]	d_s = -0.80 [-1.31, -.29]
	School Efficacy			In the prime condition school self- efficacy was lower for Low SES students than high SES students, compared to control condition.	d_s = -0.47 [-.99, .05]	d_s = -0.12 [-.60,.37]
McCoy & Major (2007) [1]	Attributions for rejection	Women	Discrimination vs. Internal Attributions	In the prime condition, women were more likely to make internal attributions for the rejection (e.g., blame themselves) than blame on discrimination. Women in the control condition were no more likely to blame themselves than they were to blame discrimination	d_z = -0.44	d_z = -0.18

	Men	Discrimination vs. Internal Attributions	In the prime condition, men were no more likely to blame themselves than they were to blame discrimination. in the control condition were more likely to blame themselves than they were to blame discrimination.	d_z = -0.07	d_z = .70

3.3.3.6 ***Does Meritocracy predict less favorable decisions toward low-status groups?***

Adhesion to the European Union. A single study found a small effect of Meritocracy predicting opposition to Turkish Adhesion to the EU (*vs.* control condition) (Pereira et al., 2009).

Monetary rewards. Across four studies conducted in the US, a less favorable outcome for the female target (*vs.* male target) was found in the Meritocracy prime condition compared to a control condition (Castilla & Bernard, 2010; Thompson, 2015). The female candidate was consistently less rewarded (e.g., bonus reward), compared to the equally qualified male candidate, when priming participants with Meritocracy (*vs*. control condition). Other types of decisions (e.g., hiring or promotion decisions) were not impacted by the prime condition (*see* Table 6).

Acceptability of sacrificing the target. In a trolley dilemma, priming Meritocracy made the decision to sacrifice a low-status target (i.e. drug addicts) for the sake of saving five individuals more acceptable (*vs*. the control condition). This result was not found with another type of low-status target (i.e. homeless) (Moreira, 2016). Moreover, when comparing asymmetrical targets, priming Meritocracy made the decision to sacrifice a low target (e.g., homeless) less acceptable than sacrificing a high-status target (e.g., White male), whereas, sacrificing a drug addict was equally acceptable as sacrificing a high-status target (e.g., White male).

Monetary donation. Donation to a homeless shelter was found to be moderated by the way PWE prime was induced. Manipulating the *justifier of inequality meaning* of PWE decreased the likelihood of donating money to a homeless shelter (*vs.* manipulating the *social equalizer meaning* of PWE) (Levy et al., 2006, *study 4*).

Table 6. Summary of studies related with the Impact of Meritocracy and Decisions toward Low and High Status Targets

Study	**Target**	**Outcome (Low Status – High Status)**	**Results**	**Effect size *d [95% IC]***	
				Prime	Control
Castilla et al., (2010) [1]	Women	monetary reward	Less favorable outcome for female target in the prime condition	d_z = – 0.31	d_z = 0.27
		Hiring decision	No differences between female and male target.	d_z = 0.00	d_z = 0.02
		Promotion decision	No differences between female and male target	d_z = – 0.08	d_z = 0.09
Castilla et al., (2010) [2]	Women	monetary reward	Less favorable outcome for female target in the prime condition	*Not Estimable*	*Not Estimable*
Castilla et al., (2010) [3]	Women	monetary reward	Less favorable outcome for female target in the prime condition	d_z = – 0.30	d_z = 0.01
Thomson et al., (2015)	Women	monetary reward	Less favorable outcome for female target in the prime condition	d_s = –1.69 [-2.04,-1.35]	d_s = – 0.47 [– .79, –.15]
Moreira_2016 [1]	Homeless		No differences between homeless and White male target	d_s = – 0.51 [– .79, – .15]	d_s = – 0.57 [– .84, –.29]
Moreira_2016 [2]	Homeless	acceptability of sacrificing the target	Less acceptability of sacrificing the low target, relative to the high status target the in the prime condition.	d_s = – 0.50 [– 1.09, .08]	d_s = 0.14 [– .42, .70]
	Drug Addict		No differences between drugs addict target and White male target in the prime condition.	d_s = 0.0 [– .57,.57]	d_s = – 0.32 [– .89, .24]

Summary of the Main Findings and Discussion

The impetus for initiating this systematic review was the number of mixed results across studies in the literature, including inconsistent findings from our own lab that used Meritocracy prime paradigms to test status-based differential outcomes. In some of our experiments, for example, we found that Meritocracy beliefs positively predicting outcomes toward the low-status target; in other experiments, we found Meritocracy beliefs negatively predicting outcomes toward

the low-status target. Thus, the purpose of this systematic review was to (a) summarize the content of the different prime tasks; (b) summarize prime manipulation checks effectiveness, and (c) analyze whether priming Meritocracy predicted less favorable outcomes toward low status groups.

The present systematic review examined 32 studies that contained 57 outcomes. The work we reviewed was distributed across six domains and spanned 29 years of research. Results across studies revealed that despite the existing differences in the components highlighted, the salience of any of the Meritocracy dimensions facilitates the use of internal causal attributions, negative evaluations and stereotyping toward low status groups, affecting negatively decisions involving low-status group members, particularly in organizational contexts.

Our analysis helps identify basic components of Meritocracy beliefs and systems and illuminate how these components are organized and framed within the scope of other satellite concepts. We have shown that both Meritocracy and PWE primes incorporate the *effort/hard work* aspect of both ideologies. In addition to this aspect, Meritocracy primes, to a large extent, incorporate internal locus of control, and to some extent the idea that people can achieve social mobility. In turn, PWE prime captures, to a smaller extent, the *internal control* aspect, comparing to the Meritocracy prime. Additionally, social mobility primes fully focus on this structural component of Meritocracy beliefs. And finally, a core dimension that is largely absent in most of the primes is the idea that the social system provides equal opportunities for all, with the exception of two studies (Castilla et al., 2010; Darnon et al., 2018).

Although differences in the degree to which the dimensions are present may vary, the patterns we observed seem to suggest that the two internal dimensions that inform the concept of Meritocracy – *effort/hard work* and *internal control* – are, to a large extent, present both in Meritocracy and PWE primes. In other words, the Meritocracy and PWE primes show similarities by integrating those internal dimensions. In turn, Meritocracy and social mobility primes show similarities by integrating, to a greater extent, the external dimensions, as for example the *social mobility* aspect.

Concerning the prime affecting the activation of the concept, a substantial number of studies did not report a prime manipulation check. As a result, we were unable to assess the effectiveness of those experiments. Among those studies measuring concept endorsement, Meritocracy prime paradigms reported higher endorsement of meritocratic beliefs, compared to PWE prime

paradigms. However, this conclusion should be interpreted with caution since there is high variability between Meritocracy and PWE primes.

As far as our systematic search could find, the original paradigm developed by McCoy and Major (2007) was used in 6 subsequent studies, across four countries (US, Canada, Netherlands, and Portugal). Despite being the most frequently implicit task used, only two single manipulation checks were reported, suggesting primed individuals more strongly agree about individual mobility (e.g., America is an open society in which success is possible for all individuals; McCoy & Major, 2007), are more optimistic about the future of societal fairness and strongly agree about societal justice in the country (e.g., Canada) (Laurin et al., 2011). These findings suggest that a subtle activation temporarily increased not only specific aspects of Meritocracy value but also broader aspects associated with fairness and satisfaction with the social system (Jost & Hunyady, 2005; McCoy, Wellman, Cosley, Saslow, & Epel, 2013). This way, when the content of the prime reflects alone features of a Meritocracy system, individuals tend to perceive that system as a more permeable one, in which, through hard work and talent, people can move individually into a higher social position. This perception of a greater status permeability within the system is reflected in a greater belief in societal fairness and social equality. Such version of Meritocracy beliefs can be found in popular "rags to riches" stories, with the implication that people from all social categories have equal potential to succeed through hard work and effort. So, this evidence is consistent with the meaning of Meritocracy as a *social equalizer*, as defined by Levy and colleagues, and associated with greater egalitarianism (*see* Levy et al., 2010; Levy et al., 2005; Levy, et al., 2006) across different age and social status groups (Levy, et al., 2011).

But when people are made to believe that meritocracy exists in the social system (Son Hing et al., 2011), and subsequently are presented with information that contradicts that same social reality, then is likely that individuals engage in justifications to explain the dissonance about how the system should be, but is not. So, when a system is not meritocratic but people believe that it is a Meritocracy, such a mismatch, it is likely to have significant social implications for intergroup relations. For example, members of low status groups may be inclined to see their social position as legitimate and thus be accepting, and high status group members may logically infer low status groups as individually responsible for their disadvantage position in the social system (McCoy & Major, 2007; Rüsch, Bodenhausen, & Corrigan, 2010). This legitimizing intergroup dynamics makes the role of Meritocracy beliefs fundamental to understand the maintenance of social

inequality. Particularly, in social systems characterized by asymmetrical status relations (Jost, Pelham, Sheldon, & Sullivan, 2003). In such societies, Meritocracy as a socially shared system of beliefs, serves as a social glue, holding the status-based hierarchy, and importantly, making inequalities more acceptable (Jost & Hunyday, 2003; Major & Kaiser, 2017; Son Hing et al., 2011), hence promoting stability within stratified social system (Kay & Friesen, 2011; Laurin et al., 2013; Tajfel & Turner, 1979).

Moreover, in such societies, Meritocracy beliefs seems to operate as a facilitator of intolerance toward low status groups, by rendering access to attributional, stereotypical and negative inferences about specific social groups (Biernat et al., 1998). As the combining results show, participants more easily show implicit negative attitudes, infer negative internal attributions and stereotyping, after being primed (*vs.* control group) (Costa-Lopes et al., 2017; Ho et al., 2002).

In addition, it has consequences for preserving the *status quo* of dominant groups in asymmetrical contexts (Jost, et al., 2003). And how? For example, by opposing policies aimed at promoting greater equality between groups (Wellman et al., 2015) or by decreasing egalitarian values in adults (but not young children) (Levy et al., 2006, *study 3*). However, this is true only when Meritocracy is used as a *justifier* (Levy et al., 2006), and is more likely to be a justifier when it is also perceived to be a *descriptive* social system (Son Hing, et al., 2011). And that is because when prescriptive, Meritocracy favors acceptance of merit-upholding social policies designed to bring about more intergroup equality in the workplace (e.g., positive discrimination) and more opposition to a merit-violating policy (Chatard et al., 2006). This evidence is in line with correlational studies on principled Meritocracy suggesting that people with stronger prescriptive beliefs about merit were more opposed to merit-violating policies but not more opposed to merit-upholding program policies than were people who weakly endorsed the merit principle (Bobocel, Son Hing, Davey, Stanley & Zanna, 1998; Davey, Bobocel, Son Hing & Zanna, 1999).

Moreover, the idea that priming Meritocracy leads to more negative evaluations of low status after exposing participants to claims of anti-white bias (Wilkins, Wellman, Flavin, & Manrique, 2017a), can also be understood within a broader conceptual framework involving social identity theory. From a social identity perspective (Turner, Brown, & Tajfel, 1979), exposing the high-status groups to a type of claim (e.g., anti-male bias) portraying a threat (e.g., discrimination) could make salient certain social categories and potentially threaten the identity of those individuals who belong to high-status groups. If this is correct, it would result in high ingroup identification for

high-status group members (but not necessarily for low-status group members; *see* Wilkins, Wellman, & Schad, 2017b) and in ingroup favoritism as shown by the increased positive evaluations and helping intentions toward a White male target found by Wilkins and collaborators (2013), and in outgroup derogation (Wilkins, Wellman, Flavin, & Manrique, 2017a). The fact that this result happens only when Meritocracy is salient suggests that as a socially shared system of beliefs, Meritocracy opens the door to support for high status group members when their identities are threatened.

Finally, when causal attributions are added to the picture, it serves to accredit the target with more or less value (Pansu, Breassoux, & Louche, 2003). In order for Meritocracy to perform its function of providing psychological comfort (Bahamondes, Sibley, & Osborne, 2019; Jost, Wakslak, & Tyler, 2008), it is necessary to convey the idea of individual control and responsibility over the (lack of) success achieved or the believing in a socially mobile society (Sagioglou, Forstmann, & Greitemeyer, 2018). Because when others' failure occurs, it is cognitively easier to attribute it to internal rather than external explanations (Ross, 1977), Meritocracy beliefs, through the work of its internal hard drives - effort/hard work and internal control - acts as a facilitator of internal explanations to decrease the perceptions of group-based discrimination. For example, telling participants that a female target has been discriminated against due to sexism led participants (exposed to the prime) to perceive less prejudice against the female candidate, to endorse gender stereotypes to a significantly higher degree (McCoy & Major, 2007) and to judge the female target as less competent (Redesdorff et al., 2016). Because attributing a discriminatory result to external causes invites us to challenge the legitimacy of this discrimination, it is necessary to neutralize potential threats that call into question the legitimacy of such discrimination. To this end, activating in people's minds Meritocracy beliefs facilitates the access to stereotypical inferences and evaluations, which in turn, are used to neutralize gender-based discrimination perception in the workplace. These results are aligned with recent findings suggesting that individuals show a greater tendency to engage in meritocratic beliefs and support inequality (Brandt, 2013; Kraus & Callaghan, 2014; Kraus, Rucker, & Richeson, 2017).

Interestingly, telling female participants that a female target has been discriminated against due to internal factors (e.g., less competence) led merit-primed participants (*vs.* social equality-primed) to see the ingroup target as more competent (Redesdorff et al, 2016). This finding is striking given the fact that Meritocracy -primed females react more favorably toward the ingroup

target when the behavior does not challenge the legitimacy of the negative outcome. As if attributing a discriminatory outcome to internal causes (e.g., lack of competence) is to postulate the legitimacy of the negative outcome. As such, this finding is relevant for studies shedding light into the interplay of Meritocracy and internality norms because it opens new ways through which the legitimacy of inequality may operate (Walkers, 2014).

However, what are the limits to this palliative effect that underlies the meritocratic ideology? For disadvantage groups, one of the consequences shown is that individuals primed with Meritocracy showed a lower psychological well-being and lower self-esteem, especially marginalized groups, such as overweight women (Quinn & Crocker, 1999). Another example arises in the educational context, where, primed low SES students performed significantly lower in a performance test than high SES students, compared to students in the control group (Darnon et al., 2018). Interestingly, among students, self-efficacy had a buffering effect, as the strength of the causal relationship between Meritocracy and school performance decreased after taking into account self-efficacy. A third finding suggests that if people are led to believe that Meritocracy exists, in the face of discrimination or failure, they are more prone to blame themselves than the system. And this is particularly true for members of low status groups (McCoy & Major, 2007). This evidence is consistent with the idea developed by Jost and colleagues that the system-justifying beliefs serve the palliative function of reducing the negative effect of an unfavorable situation, especially, but not exclusively, among low-status groups (e.g., Jost & Hunyday, 2005).

Limitations

The present research focused exclusively on experimental studies developed with the aim of testing whether by priming Meritocracy, low status groups would be more socially disadvantaged in a range of outcomes. We made this decision because our focus is (a) on the consequences of Meritocracy only for low status groups and (b) on the causal inference between the two variables. Our goal in the present review was stimulate more systematic study of how Meritocracy primes affect the activation of concepts associated with Meritocracy beliefs, which in turn affect social perceptions and behaviors. Because of the still limited body of experimental research on this topic and the broad range of ways that Meritocracy has been conceptualized, we pursued a systematic review. However, as the body of work on this topic grows and becomes more conceptually

cohesive, a formal meta-analytic review may complement our initial analysis in important and empirically fertile ways.

Of importance, a substantial number of studies did not report a prime manipulation, making it largely unfeasible for us to compare the effectiveness of manipulation in activating the concept. The question of whether manipulation checks are necessary is currently under discussion (see Fayant, Sigall, Lemonnier, Retsin, & Alexopoulos, 2017), but a more precise, cumulative estimate asserting internal and construct validity of the prime would benefit the research (Flake, Pek, & Hehman, 2017; Foschi, 2014).

The studies included in our systematic review were carried out predominantly in the United States. The search strategy uncovered a few studies from European countries, so some caution is needed when assuming that the results found mostly in one country, apply equally to other nations. For example, researchers have noted that acceptance of inequality is informed by the levels of inequality people perceive to exist in the country (Castillo, 2012; Trump, 2017). Moreover, acceptance of inequality and desire for inequality are stronger for highly meritocratic individuals and in countries were meritocratic norms are more salient (e.g., the United States) (García-Sánchez, Van der Toorn, Rodríguez-Bailón, & Willis, 2018). So, the general detrimental effects of Meritocracy beliefs for low status groups found in this systematic review should, therefore, be considered to apply to a social context where Meritocracy is more salient. Because, as noted in other studies, in less status permeable countries where meritocracy beliefs are less salient, Meritocracy beliefs are less likely to acquire the legitimizing function and instead operate through its socially equalizer mechanism (Ramírez et al., 2010; Rosenthal et al., 2011; Crandall & Martinez, 1996). Hence, further published and unpublished research outside the United States would benefit the field. Particularly, in countries were perceptions of upward social mobility are lower, but work ethic beliefs are high.

Finally, we were able to calculate the size of the control and treatment group effect for most variables at the target level, but calculating the combined effect of the different primes was beyond our purpose. Thus, the results we described are limited to the effect of each treatment or control group on the outcome of interest.

Conclusions

Understanding the adverse social consequences of Meritocracy beliefs for disadvantaged groups is clearly important, especially when inequality across western societies is continuously rising (Organization for Economic Co-operation and Development, 2016; World Bank, 2016). The results found in this study derived from a two-stage process carried out to explore the possibility of integrating Meritocracy, SLBs and PWE effects on socially relevant outcomes involving low status groups, while systematizing the commonalities among the various paradigms currently used. Although Meritocracy, SLBs and PWE prime show differences in the components highlighted, these differences seem to produce similar results. That is a confirmation of the general hypothesis according to which low status groups members are more likely to receive an unfavorable outcome when Meritocracy (or similar) is made salient, compared to any other experimental or control condition. The salience of any of the components of Meritocracy facilitates the use of internal causal attributions, negative evaluations and stereotyping toward low status groups, affecting negatively, decisions involving low-status group members, particularly in some domains (e.g., organizational). Moreover, the way in which Meritocracy seems to operate is key for producing the social glue necessary for the stability of whatever inequalities.

The findings also give a hint on how the components of Meritocracy may be informing the way lay people justify why low-status individuals are more likely to be discriminated against, by for example facilitating the access to stereotypical and attributional content about others (e.g., *effort/hard work* aspect); to offer psychological comfort, by conveying the idea of individual responsibility to promote a feeling of greater control over the environment (e.g., *internal control* aspect); and finally to promote a stable social system between asymmetric groups, by conveying the idea of equal opportunities and upward social mobility for all, an idea so valued in democratic and liberal societies (e.g., *social mobility and equal opportunities* aspect).

Ideally, this work will inform and facilitate further research aimed at understanding when and under which circumstances the belief in Meritocracy disproportionally affects members of relative disadvantaged groups, and how each component may be used to perpetuate the existing evidence concerning the negative consequences for intergroup relations. By doing so we may gain a better understanding of how to tackle the downside of the belief in Meritocracy.

Chapter V

The impact of social status on medical decisions:

Investigating the role of meritocracy beliefs with medical students

Study 6

Overview

So far, the studies conducted were carried out with laypersons, where the decisional scenarios included prioritization of patients in transplant scenarios. Namely, we presented 6 clinical cases with two trial cases ad four filler cases describing fictitious patients with specific clinical situations, and participants were asked about to make discretionary decisions.

Thus, in this stage, we wanted to test our general hypothesis in a medical scenario closer to reality, and with a sample of people representing future health professionals. Thus, we move on to other types of decisions that are equally critical, impacting on people's lives, and involving the allocation of limited or heavily burdened resources to the National Health System. We chose access to hepatitis C treatment representing the new type of socially critical decisions in medical settings and selected as a sample the future health professionals, the medical students.

Hepatitis C treatment is one such circumstance that may be particularly vulnerable to social biases given the high level of discretion involved. Hepatitis C virus (HCV) infection is a major public health problem worldwide due to the high rate of progression to chronicity and the potential for progression to cirrhosis (Anjo et al., 2014). However, the new generation of direct-acting antivirals has improved dramatically the rates of cure for chronic hepatitis C (Vutien, Hoang, Brooks, Nguyen, & Nguyen, 2016). Thus with the goal of eradicating the disease as a public health problem, the National Health System has enacted universal access to new hepatitis C treatment. Therefore, all HCV-infected patients, living in the country, including documented and undocumented migrants, have access to health care, in the same way, that it is provided to the general population. The decision to treat all people infected with the Hepatitis C virus made Portugal one of the first European countries to implement a structural measure for the elimination of this public health problem. However, the economic burden of each treatment led to the adoption of measures promoting efficient and rational use of the respective treatments, ensuring equitable access for patients (DGS, 2017).

From a distributive justice perspective, the implementation of an efficient and rational (i.e., equity) based distributive principle, may entail beliefs about fairness, which often lead people to select potential recipients differently from one another (see Levine & Thompson, 1996). For

example, Skitka and Tetlock's (1992) model of distributive justice, which is based on the merit principle, suggest that the unequal distribution of resources may be viewed as rational when people who are perceived to be responsible for their predicament are also thought to be undeserving of a scarce resource. In particular, this model of distributive justice proposes that the allocation of resources typically depends on two different appraisals: (a) if resources are perceived to be scarce, then (b) decision-makers assess the degree of responsibility the claimants carry for their predicaments. Thus, Hepatitis C treatment is a good example of medical good representing a resource, that due to its high costs, it's perceived to be scarce and therefore, should to be used in an efficient and rational way. Moreover, the degree of responsibility the claimants carry for their predicaments might vary from low to high, based on the cause of hepatitis C virus infection. For example, hepatitis c infection resulting from sharing needles or unprotected sexual practices may increase the degree of personal responsibility, while hepatitis C infection resulting from blood transfusion carrying the hepatitis C virus, may dramatically decrease the degree of personal responsibility. Thus, we developed new clinical vignettes focusing in high responsibility scenarios[10]. This decision was informed by our theoretical proposal articulated with theorizing on framing illness causal attributions and resource allocations models (Pratto et al., 1999; Skikta & Tetlock, 1992). We propose that beliefs in Meritocracy influence how people allocate decisions, particularly when framing the cause of the illness in a way that one can infer the patient's personal responsibility for being in that state of health.

Given the rates of cure for chronic hepatitis C that have improved dramatically with the introduction of direct-acting antivirals, research documenting the provider's racial bias in prescribing treatment for hepatitis C is recent and has flourished at a rapid pace. For example, cohort studies points to the importance of patient's social status (e.g., racial category) as a predictor of decision-making bias (Tohme, Xing, Liao & Holmberg, 2013; Vutien, Hoang, Brooks, Nguyen, & Nguyen, 2016; Rogal, McCarthy, et al, 2017; Sims, Pollio, Hong, & North 2017), particularly in the US context.

[10] For the creation of the clinical content of the medical vignettes, we consulted two specialists in hepatitis C virus, Prof. Dr. Marinho Pinto and Professor Francisco Antunes. Both experts provided technical support in the creation of clinical cases, including myths associated with the efficacy and risk associated with the treatment of hepatitis C; Stereotypes associated with patients/patients seeking treatment; type and degree of responsibility attributed to users. They also provided technical support in the operationalization of relevant social variables, e.g. degree of patient responsibility, potential risk factors; and operationalization of relevant clinical information, namely disease severity, symptomatology, and other important information to determine the level of recommendation for treatment.

In another type of discretionary decision, Calabrese and collaborators (2014; 2018) found that medical students' willingness to prescribe antiretroviral pre-exposure prophylaxis (PrEP) to a White *vs.* Back patient, was mediated by medical student's perception of sexual risky behaviors. Specifically, perceiving the Black patient as more likely than the White patient engage in unprotected sex if prescribed PrEP prophylactic treatment, reduced the willingness to prescribe PrEP to the Black patient (*vs.* White patient). This results is consistent with research on stereotypes activation in clinical judgement and decision making (Ryn, Burgess, Malat, & Griffin, 2006; Hirsh, Jensen & Robinson, 2010) suggesting that physicians often associate racial category with stereotypes as decision-making heuristics, which in turn may unduly influence treatment prescription (Bean, Focella, Covarrubias, Stone, Moskowitz, & Badger, 2014; Dovidio & Fiske, 2013; Moskowitz, Stone, & Childs, 2012). This may be more likely to occur due to the very nature and context of physicians' work. There is evidence that time pressure, the need to make quick judgments, or task complexity increases the likelihood of stereotype usage (Bodehausen & Lichtenstein, 1987; Gilbert & Hixon, 1991; Gordon & Anderson, 1995). Since time pressure or the need to make quick judgements are common characteristics of physicians' work, we created a decision-making paradigm closer to naturalistic conditions, by adding the time pressure condition, used in the previous studies. Thus all participants had to make each decision within 90 seconds.

Pilot Study

We conducted a pilot study testing the equivalence of vignette's diseases in the following dimensions: (1) personal responsibility; (2) moral responsibility; (3) Physical distance; (4) comfortable / at ease; (5) pleasantness; (6) pity; (7) sympathy; (8) prioritization for treatment. Importantly, we want to compare the equivalence of a) unprotected sex practices, and (c) non-injectable drug use (i.e., shared tubes for cocaine consumption), since these two were chosen to represent the critical trials. For this reason, randomization of clinical cases was controlled (*see* Appendix C for details). Regarding the hypotheses, we expect the injectable drug use case to be viewed with greater responsibility than the other two. We expect no statistically significant differences between the condomless sex case and the non-injectable drug use case.

Measures

Using a 7-points rating scale, from 1= nothing at all to 7 = very much, participants were asked to what extent: (1) consider the patient personal and (2) morally responsible for the infection, (3) feel at ease, (4) feel pleasant to interact with (5) feel physical distant from, (6) pity and (7) sympathy for someone with such medical condition.

Additionally, prioritization for treatment was measured using a 7-points rating scale, from 1= low priority to 7 = high priority.

Level of knowledge about hepatitis C. Using a 7-points rating scale, ranging from 1= Not at all to 7 = Very, participants asked how familiar were with hepatitis C and the available treatments (r = .73).

Method

Participants. A total of 21 physicians and 33 medical students (70.4% female; M_{age}=28.31, SD_{age}= 4.94) completed an online survey. Participants receive no monetary compensation for their participation in the research.

Procedure. The medical students were invited to participate in an online study and were told that the research was interested in their perception about the clinical information provided in medical cases. Participants were presented with three clinical vignettes presenting similar cases varying in the cause of hepatitis C infection. The causes include (a) unprotected sex practices, (b) shared needles in the context of drugs users and (c) shared tubes for cocaine consumption (e.g., speedballs). Participants were asked to evaluate each clinical vignette, according to earlier described dimensions. Following evaluating each dimension, participants were told to imagine that they were the hospital manager who has been authorized to treat 50 patients with hepatitis C out of two hundred patients on the waiting list for treatment, and were ask to indicate the extent to which they would recommend each patient for treatment of hepatitis C. Participants were randomly assigned to one of the two order conditions: participants either see the (a) condomless sex condition

first or (b) the non-injectable drug use condition. Other than that, clinical cases were similar in age and health status. Afterward, participants completed sociodemographic information and briefly debriefed.

Results

Personal responsibility. The repeated measures ANCOVA shows that at least one of the means of the cause of the contagion differs from the others F (2, 51) = 3.75, p =.03, η_p^2 = .13, and that the order of presentation is relevant, *Wilks' Lambda* (2, 51) = 4.64, p =.01, η_p^2 = .15. The contrast tests seem to indicate a quadratic pattern between the three means of the "cause of infection", F (1, 52) = 6.32, p =.02, η_p^2= .11, meaning that personal responsibility is greater in the case in which the patient contracted the disease through shared needles (M=4.98, PD=1.65), followed by unprotected sex (M=4.87, PD=1.52) and finally the inhaled drugs case (M=4.61, PD=.1.81). The results of the analysis of the test of comparisons between condomless sex case and inhaled drug use reveal a p =.17, indicating that both cases are perceived in a similar way. The order of presentation explains the variation in the attribution of responsibility. The degree of attribution of responsibility is higher when the case of inhaled drugs is viewed in the last place (M=4.81, SD=.38). Conversely, the degree of responsibility is higher when unprotected sex is viewed at the last. (M=4.94, SD=1.86). In other words, what this pattern suggests is that the last case receives a lower score than the first case seen.

Moral responsibility. The repeated measures ANCOVA shows that at least one of the means of the cause of the contagion differs from the others *Wilks' Lambda* (2, 51) = 4.53, p=.02, η_p^2 = .15 and that the order of presentation is relevant, *Wilks' Lambda* (2, 42) = 5.37, p=.008, η_p^2 = .17. Contrast tests show a quadratic pattern between the three means of the "cause of infection" F (1, 52) = 8.64, p =.005, η_p^2 = .14, suggesting that a higher morality is perceived for the patient infected through shared needles (M=4.56, PD=.28), followed by condomless sex (M=4.22, PD=.29) and inhaled drugs case (M=3.94, PD=.28). The analysis of the multiple comparison test reveals a p=.21, meaning that both cases of interest (i.e., condomless sex condition and the non-injectable drug use condition) are similarly perceived, p =.16. There is a linear pattern of the interaction

Morality×Order, F (1, 52) = 10.34, p =.002, η_p^2 = .17. That is, the degree of moral responsibility is lower when injectable drug use is viewed last. (M=3.39, SD=.43). Conversely, the degree of responsibility is lower when condomless sex is viewed last. (M=4.15, SD=.36). Again, what this pattern suggests is that the last case receives a lower score than the first case seen.

Physical distance. The repeated measures ANCOVA shows that that the means of the cause of the infection do not differ significantly from each other *Wilks' Lambda* (2, 51) = .311, and that overall, the order of presentation is not significantly relevant, *Wilks' Lambda* (2, 51) = .743.

Ease. Means of the cause of the infection do not differ significantly from each other *Wilks' Lambda* (2, 51) = .311, and that overall, the order of presentation is not significantly relevant, *Wilks' Lambda* (2, 51) = .743.

Pleasantness. Means of the cause of the infection do not differ significantly from each other *Wilks' Lambda* (2, 42) = 1.00, and that overall, the order of presentation is not significantly relevant, *Wilks' Lambda* (2, 42) = .1.29.

Pity. Means of the cause of the infection do not differ significantly from each other *Wilks' Lambda* (2, 51) = .25, and that overall, the order of presentation is not significantly relevant, *Wilks' Lambda* (2, 51) = .12.

Sympathy. Means of the cause of the infection do not differ significantly from each other *Wilks' Lambda* (2, 51) = 1.58, p =. 22, and that overall, the order of presentation is not significantly relevant, *Wilks' Lambda* (2, 51) = 2.23, p=.12, η_p^2 = .08

Prioritization for treatment. The repeated measures ANCOVA shows that that the means of the cause of the infection do not differ significantly from each other *Wilks' Lambda* (2, 51) = 1.32, and that overall, the order of presentation is marginally significant, *Wilks' Lambda* (2, 51) = 2.64, p = .08, η_p^2 = .09. Contrast tests show a quadratic pattern between the three means of the "cause of infection" F (1, 52) = 4.22, p =.05, η_p^2 = .08. We ascertain whether the cases of interest (i.e., condomless sex condition and the non-injectable drug use condition) differed in each order. The

multiple comparison tests revealed that the priority given to the condomless sex case is similar to the priority given to the non-injectable drug use case in both order presented, $p = .32$ and $p = .63$.

Conclusions

The cause of the contamination, condomless sex case and non-injectable drug use case, do not seem to differ in the dimensions analyzed. The order of presentation is an important factor in the variation of the effect of the cause of the contamination, and thus we maintain the randomization in the main study.

Main study

Because the order of presentation of the clinical cases proved to be an important factor to be controlled in the main study, we maintained the randomization of the order in this study. Although the cause of the contamination, condomless sex case *vs.* non-injectable drug did not differ in the dimensions analyzed, we reason that, when associated with patient's racial category, it may be used as decision-making heuristics, influencing low status prioritization (Bean, Focella, Covarrubias, Stone, Moskowitz, & Badger, 2014; Dovidio & Fiske, 2013; Moskowitz, Stone, & Childs, 2012). Moreover, theorizing on stereotypes activation contends that when providing information stereotypically consistent with target's racial group, outcomes may be more likely to be unfavorable toward the racially targeted person (Bodenhausen & Lichtenstein, 1987; Bodenhausen & Wyer, 1985), compared to a stereotypical inconsistent condition. Thus we addressed this supplementary goal. We reason that when the low status patient appears associated with a consistent stereotype (i.e. condomless sex), a less favorable evaluation would be more likely to occur. In contrast, when the low status patient appears associated with an inconsistent stereotype (i.e. non-injectable drug), low status should be as prioritized as the high status patient.

Build on our previous research on the role of patient social status in medical decision-making, the purpose of the main study is three-fold: 1) to examine the relationship between social status and clinical decision-making among medical students; in particular, we test whether social status impact on the (a) prioritization for treatment, (b) on evaluation that the patient will benefit

from the treatment, (c) and perceptions of patient competence to follow the treatment; and 2) to examine whether (un)matching racial stereotypes predicts status-based differentials in treatment decisions, and c) to examine whether the level of meritocracy support explains differentials in treatment decisions of low and high status patients.

Regarding the hypothesis, the low status target is expected to be more at a disadvantage in the three dependent variables (prioritization for treatment, target evaluation, and target competence). The effect of social status is expected to be qualified by the activation of stereotypes (consistent *vs*. inconsistent). In the condition of consistent stereotype, the low status patient is expected to be evaluated in a similar way to the high status patient. In the condition of inconsistent stereotype, it is expected that there will be a penalization of the low status patient (*vs*. high status). Finally, we expect distinctions between high and low status in the prioritization of hepatitis C treatment to be higher among highly meritocratic participants than among low meritocratic participants. Among highly meritocratic participants, we estimated that the distinction between low and high status to be more penalizing for the low status. Among low meritocratic participants, we estimate that the patient's status does not impact the decision to prioritize.

Measures

Prioritization for treatment. One item measured in a 7-points scale, from not at all (1) to very much (7) to what extent would they recommend the person for the hepatitis C treatment.

Target Evaluation. One item measured in a 7-points scale, from not at all (1) to highly confident (7) how confident they were on that the person would benefit from the hepatitis C treatment.

Target competence. One item measured in a 7-points scale, from not at all (1) to highly (7) how likely would the patient be to follow doctor recommendations and to responsibly take care of his health. The items were averaged together to form a composite measure (r = .91).

Descriptive meritocracy. We measured descriptive meritocracy using the same scale used in previous studies (Garcia, Desmarais, Branscombe, & Gee, 2006).

SDO- Antiegalitarianism. This legitimizing ideology (Ho et al., 2012; 4 items, $\alpha = .83$) taps into beliefs about opposing to equalizing conditions among groups and treating groups equally (i.e., we should not push for group equality; we shouldn't try to guarantee that every group has the same quality of life; it is unjust to try to make groups equal; group equality should not be our primary goal.)

Political Orientation. A 7-points scale, from extreme-left (1) to extreme-right (7) measured political orientation.

Manipulation check for target prime. Participants were asked whether they had to evaluate a non-Portuguese patient in a dichotomous variable (no/yes), and those who selected "yes" were asked to indicate the nationality of the target, being the available options: Cape-Verdean, Angolan, Brazilian and Ukrainian.

Level of knowledge about hepatitis C. Two items measured the familiarity with hepatitis C and the available treatments ($r = .83$), using a 7-points rating scale, ranging from 1= Not at all to 7 = Very.

Stereotypes. In an open-ended question, participants were asked to indicate as many cultural stereotypes about African health behaviors as they could remember.[11]

Zero-sum Prioritization. Two items measured a higher prioritization for the low status patient or a higher prioritization for the high status patient.[12]

[11] We have included this question with the goal of gathering information on the content of stereotypes about health behaviors, in order to create materials for further studies. Therefore, it was not our objective to qualitatively analyze the material. Therefore, we did not report data on this question in this study.

[12] These variables correspond to two additional measures, out of the general objectives of this study, and for this reason are not included in the analyses.

Method

Participants. A total of 160 medical students were recruited through server list to participate in an online experiment, in exchange for a 10 € gift card. Participants were randomly assigned to a 2 (target status: low *vs.* high) × racial stereotype (consistent *vs*. inconsistent) mixed-model design, with within-subject in the first factor. Data from 13 participants (7%) was removed 3 due to multivariate outliers, 5 participants because of dual citizenship (Portuguese and other) and 5 participants spent less than 20 seconds or more than 90 seconds on the two critical decision-making page. Final sample comprised 147 medical students (68% female, Age: M = 21.60, SD = 2.16), distributed across the various school years (16.3% second, 20.4% third, 25.9% fourth, 24.5% fifth, 12.2% sixth).

Procedure. Participants were told that they would take part in a research study about medical decision-making processes. Participants were asked to complete a set of scales on social values, followed by some questions about the self, and finally, a clinical decision making task. The questions about the self served as a distracting task for the second part of the experiment, the medical decision making. The set of social values scales were meritocracy and SDO-Antiegalitarianism and political orientation. In the decision-making task, participants read information on Hepatitis C and on the rationalization of the treatment of the hepatitis C Virus (HCV). To ensure that participants read the information, we added an attentional check, after the information is given. Next, they were asked to imagine as a doctor, member of a panel with the mission of recommending patients for treatment of hepatitis C.

The participants viewed three clinical cases (*see* Materials in Appendix C). The first and last cases were randomized and correspond to the critical trials. The second case seen was always the same, the injectable drugs use case. For each clinical case, the participants were asked to what extent they would recommend the patient for the treatment of hepatitis C if they have confidence that the patient would benefit from the treatment and finally about the likelihood of following the recommendations of the doctor and of responsibly taking the medication.

After the medical decision task, participants were asked two of zero-sum items, and again the filled out a short version of meritocracy and SDO-E scales. They were then asked an open-

ended question about expressions of stereotypes about African health-related behaviors. Finally, manipulation check, familiarity with hepatitis C and sociodemographic information followed.

Stimuli

On the top of each clinical vignette, a photograph of the fictitious patient was added as a way to highlight patient's racial category associated with migratory status. Face images are from the Face Research Lab London Set project (DeBruine & Jones, 2017) and were blurred in order to exclude effects of facial features stereotypicality (i.e., Afrocentric features, such as darker skin tone or wider nose. This way, we can assure that results are merely based on racial category.

Table 1. Experimental design

		Social Status		
		Ordem (Fixed)		
		Low Status	**Filler Case**	**High Status**
				
Racial Stereotype activation (randomized)	**Condomless sex** Heterosexual relationships with several partners without using a condom.		Injectable drug use.	
		Consistent		Inconsistent
	Non-injectable drug use Sharing tubes to take cocaine or speedball.			
		Inconsistent		Consistent

Results

Preliminary analysis

Table 2 shows that low status evaluation is positively associated with meritocracy measured at time 2, r (147) =.17, p = .04. Political orientation correlates negatively with both low status r (147) = .26, p = .002 and high status r (147) = .26, p = .001 evaluation, suggesting right – wing supporters to be less confident that the patient will benefit from the hepatitis C treatment. Stereotype activation is negatively associated with low status evaluation r (147) = -.23, p = .005, and low status evaluation competence r (147) = -.19, p = .02. Age, sex and years of medical school are unrelated with each of the dependent variables. Level of knowledge about hepatitis C is positively related with low status r (147) = .26, p = .002 and high status r (147)= .26, p = .001 evaluation and with high status prioritization r (147)= .18, p = .03, suggesting that a higher level of knowledge about hepatitis C is associated with higher scores on target evaluation and high status prioritization.

Table 2. Descriptive statistics and intercorrelations for the study sample.

Variable	**M**	**SD**	**Stereo Activation**	**Meritocracy Time 1**	**Political Orientation**	**Meritocracy Time 2**
1. Target Evaluation - High Status	5.50	1.20	-.06	.01	.08	-.04
2. Target Evaluation - Low Status	5.65	1.10	**-.23****	.10	-.02	**.17***
3. Prioritization - High Status	5.97	.91	.08	-.07	-.05	-.08
4. Prioritization - Low Status	6.08	.89	-.02	.04	-.00	.07
5. Target Competence - High Status	5.02	1.04	.14	.04	**-.18***	-.04
6. Target Competence - Low Status	4.64	1.11	**-.19***	.15	**-.19***	.04

Main analysis

Prioritization for treatment

A 2 (Target Status: high *vs.* low) by 2 (racial stereotype : consistent *vs.* inconsistent) mixed-design ANOVA with repeated measures on the first factor yielded a marginal effect of target status F (1, 145) = 3.49, p= .06, η_p^2 = .02. The results show that low status target (M = 6.07, DP= .89) receive a higher prioritization tha the highs status (M = 5.97, DP= .91). The interection term was non-significant, target status × racial stereotype, F (1, 145) = 2.66, p= .11, η_p^2 = .02.

Although the term of the interaction is not statistically significant, it can be observed in the graph below that the high status target is significantly less prioritize for the treatment when associated sharing tubes to take cocaine or speedball, F (1, 145) = 5.77, p= .02, η_p^2 = .04. In contrast, in the stereotypically inconsistent condition status-based differentials disappears, F (1, 145) = .03, p= .86, η_p^2 = .00.

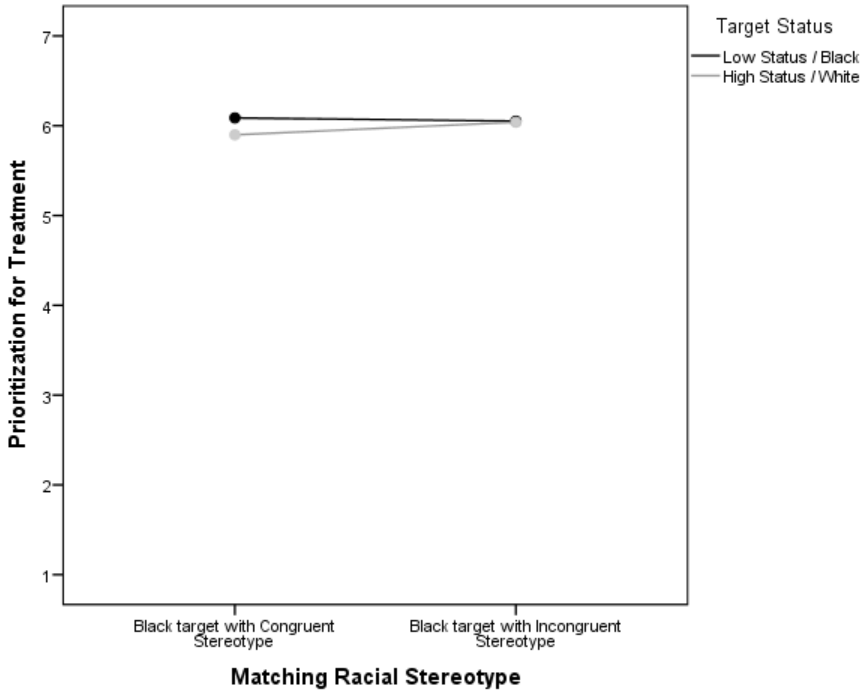

Figure 1. Prioritization of patients for a heart transplant as a function of racial stereotypically consistency condition

Target Evaluation

A 2 (Target Status: high *vs.* low) by 2 (racial stereotype: consistent *vs*. inconsistent) mixed-design ANOVA with repeated measures on the first factor yielded a significant effect of target status F (1, 145) = 5.91, p = .02, η_p^2 = .04, and this effect is qualified by the stereotype condition, F (1, 145) = 6.89, p = .01, η_p^2 = .05. A similar response pattern to the previous one can be seen. In the condition where the Black target is associated with a condomless sex scenario and the White target associated with cocaine use, the black target (M= 5.66, SD = 1.10) is perceived more positively than the white target (M= 5.51, SE = 1.20), F (1, 145) = 12.04, p = .001, η_p^2 = .08. In contrast, we found no differences in the stereotype inconsistent scenario, F (1, 145) = .02, p = .89.

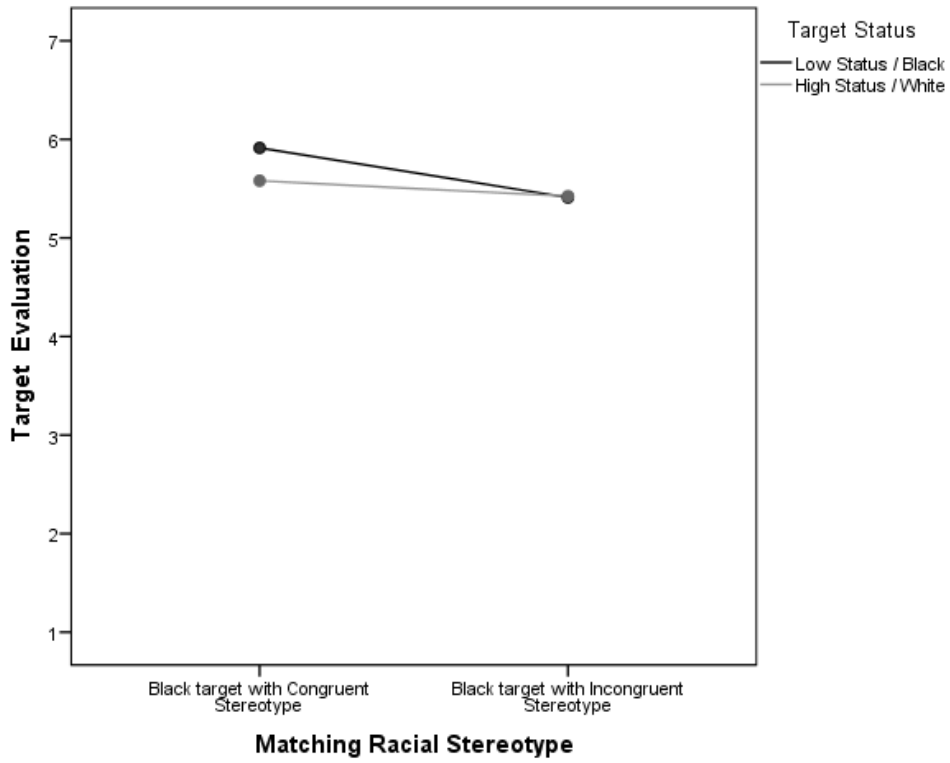

Figure 2. Confidence that the target will benefit from the transplant as a function of racial stereotypically consistency condition

The perception of target competence in taking care of his health and complying with medical advice.

A 2 (Target Status: high *vs.* low) by 2 (racial stereotype: consistent *vs*. inconsistent) mixed-design ANOVA with repeated measures on the first factor yielded a significant effect of target status F (1, 145) = 14.53, p = .000, η_p^2 = .09, and this effect is qualified by the stereotype condition, F (1, 145) = 14.53, p = .000, η_p^2 = .09. Interestingly, we observed a different pattern of response in the perception of the target's competence. Here, the Black patient (M= 4.64, SD = 1.11) is evaluated less positively than the White patient (M= 5.02 SD = 1.04), and this differential is mainly explained by the condition of inconsistent stereotype, F (1, 145) =30.96, p = .000, η_p^2 = .18. That is, in the condition in which the Black target is associated with a cocaine use scenario and the White target associated with the condomless sex scenario, the Black target is perceived as having less ability to follow the medical treatment and follow the medical recommendation.

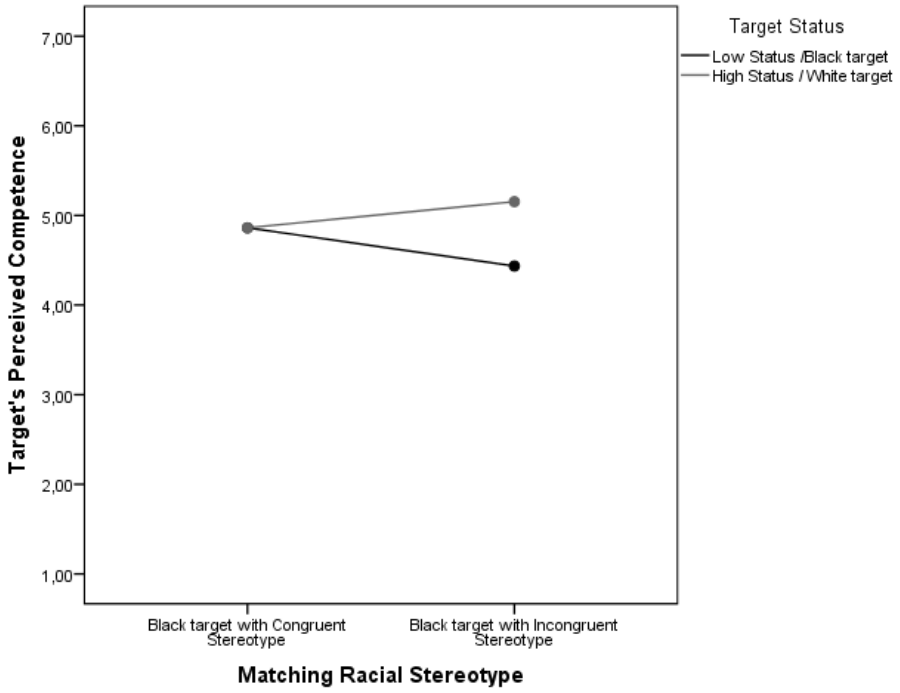

Figure 3. Target's perceived competence in health as a function of racial stereotypically consistency condition

Effect of the Social Status on the Prioritization for treatment controlling for the level of meritocracy beliefs

In the next step, we first confirmed that the experimental groups did not differ significantly in adherence to meritocratic beliefs. The results of the factorial ANOVA show that the activation of stereotypes does not significantly impact the levels of meritocracy, thus allowing the use of meritocracy as a covariate, F (1, 145) = 1.70, p = .19.

We then analyzed whether the relationship between meritocracy (measured before the experimental condition) and patient prioritization was similar for both experimental groups, in this case, consistent *vs*. inconsistent stereotype groups. We introduced in the model the meritocracy baseline, analyzing the effect of the social status in each experimental group separately. This procedure aimed to analyze the homogeneity of the regression line. If we confirm that the lines are similar across experimental groups, then we confirm that the effect of the social status on the priority given to the patient is similar between participants who score high and low in the meritocracy beliefs scale. If it is confirmed that the lines are not similar between experimental groups, then it means that the effect of the social status on the priority given to the patient is different between participants who score high and low in meritocracy, this phenomenon is called heterogeneity of the regression line.

We conduct an analysis of variance with social status as a within-factor for each experimental group, adding meritocracy as a covariate. In the consistent stereotype condition in which the cause of low status contagion is condomless sex, a contrast test reveals that the effect of social status on the priority given to the patient is similar among participants who score high and low on the meritocracy scale, F (1,66) < .06. However, in the inconsistent stereotype condition in which the cause of low status contagion is related to sharing tubes to take cocaine or speedball, the effect of social status on patient priority is significantly different among participants scoring high and low on the meritocracy scale, F (1,76) = 4.29, p = .04 , η_p^2 = .05.

These contrasting results show the existence of variability in the effect of the social status between the experimental groups, suggesting the use of a multi-level analysis to analyze the extent to which the level of support for meritocracy explains differentials in the prioritization of low and high status.

Thus, in the next step, we performed a multilevel analysis, where the level 1 variable contains two observations, the patient's status: low status and high status; and the level 2 variables include the activation of stereotypes and meritocracy.

The theoretical hypotheses lead us to hypothesize that the distinction between high and low status in the prioritization of hepatitis C treatment will be greater among highly meritocratic participants than among low meritocratic participants (H1). Among highly meritocratic participants, it is estimated that the distinction between low and high status is probably more penalizing for the low status (H2). Among low meritocratic participants, it is estimated that the patient's status does not impact the decision to prioritize (H3). Thus, the predictor of interest is the interaction of the target status with the meritocracy.

Table 3. A mixed model of patients' prioritization for a heart transplant.

	Model 0			Model 1		
	b	SE	CI	b	SE	CI
Intercept	.59***	.08	.17;.27	.60***	.08	.45;.78
Error	.22***	.03	.44;.77	.20***	.06	.16;.26
Target Status				.03	.07	-.12;.17
Racial Stereotype				-.13	.15	-.44;.11
Meritocracy				-.17	.11	-.05;-.37
Target Status * Racial Stereotype				.16	.11	-.05;.37
Target Status * Meritocracy				.23*	.10	.04;.43
Racial Stereotype * Meritocracy				.18	.20	-.21;.56
Target Status * Racial Stereotype * Meritocracy				-.21	.14	-.49; .07
	658.29			644.29		
Number of Parameters	3			10		

Fixed	1	8
Random	1	1

Code: Target Status, Low Status = -0.5; High Status = 0.5; Racial Stereotype. Sex Black = -0.5; Drug Black = 0.5

The results corroborate the first hypothesis. The Target Status × Meritocracy interaction suggests that the level of adherence to meritocracy explains differentials in the prioritization of low and high status, b = .23. SE = .10, t = 2.33, p = . 02 [IC.04;.43], and the consistent manipulation of stereotypes does not seem to significantly moderate this double interaction, b = -.21. SE = .14, t = -1.50, p = . 14 [IC95%: -.49; .07]. In other words, the way low and high-meritocracy groups behave is not influenced by the activation of stereotypes.

As can be seen in the Figure 4 below, among the highly meritocratic, the probability of distinguishing between patients based on their social status is significantly higher than among the less meritocratic, F (1, 146) = 7.59, p = .007, [CI 95%: .06; .36]. This difference was expected to be more penalizing for the low status; however, the results suggest a compensation effect of the low status, where the level of prioritization of the low status is higher (M = 6.11, SE = .11) than the high status (M = 5.90, SE = .11).

Among the lowest meritocratic, the results corroborated the advanced hypothesis, F (1, 146) = .02, p = .90, [CI 95%: -.14; .16], as the patient's status had no impact on the recommendation made to the different patients.

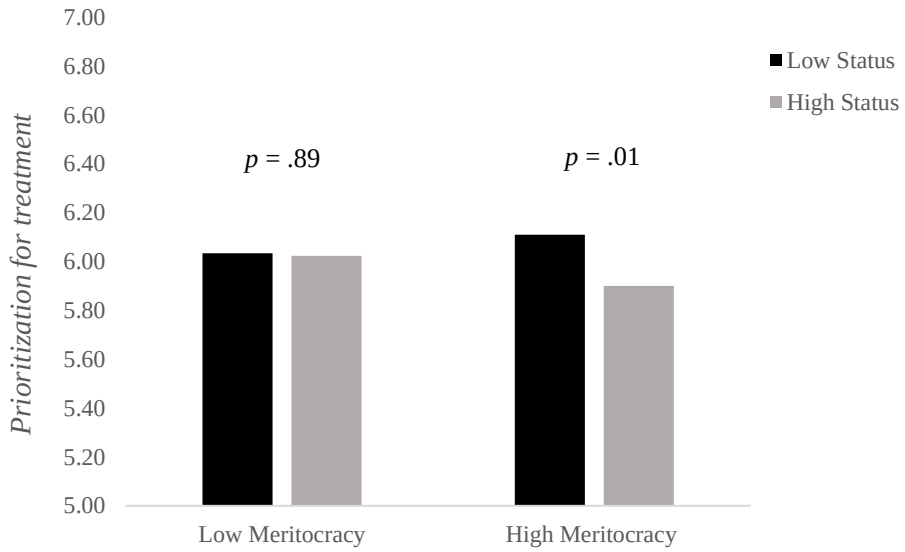

Figure 4. Conditional effect of social status on Prioritization at + 1DP and - 1DP of Meritocracy beliefs

Discussion

Despite pre-tested in several dimensions, including the responsibility dimension, the scenarios presented seem to activate different heuristics for high and low status targets.

The two contamination scenarios seem to predict different reactions to high and low status patients. Looking at the scenario of infection caused by condomless sex, which represents and is consistent with sexual risky behaviors portrayed in racial groups, when the Black patient appears associated with this scenario and the White patient appears associated with a drug-use scenario, the results show that high status individuals in a drug-use scenario are devalued in terms of recommendation for treatment. All the remaining three conditions have a similar degree of recommendation. The marginal difference found was achieved at the expense of penalizing the high status. This pattern is repeated in the evaluation of the target, where there is less confidence that the high status target will benefit from treatment in the scenario of contagion caused by sharing tubes for cocaine use.

Now, looking at the scenario of infection caused by sharing tubes for cocaine use, which is racially inconsistent with the content of stereotypes associated with low status groups such as Blacks.

When the Black patient appears associated with the racial inconsistent stereotype, the results show that participants do not punish the high status more, nor assess more negatively, as they did when the scenario was reversed. In contrast, and interestingly, the Black patient is much more devalued and perceived as incompetent and unable to follow the medical therapy when associated with an inconsistent stereotype. This result is inconsistent with the selective processing hypothesis (Bodenhausen & Lichtenstein, 1987; Bodenhausen & Wyer, 1985), which states that when the cause is stereotypically *consistent* with target's racial group, evaluation should result more unfavorable, not in a racially *inconsistent* cause.

A possible explanation can be found in the mixed-stereotypes hypothesis (Fiske, Cuddy, Glick, & Xu, 2002). This hypothesis proposes that many stereotypes include a mix of competence and warmth, as defined by low ratings on one dimension combined with high ratings on the other. In some contexts, low status targets may appear associated with a mixture of competence and warmth; that is, low status are seen as low in competence but high in warmth, and high status as high in competence but low in warmth (Eagly et al., 2000; Eckes, 1994; Williams & Best, 1990). Put differently, low status are the targets of paternalistic stereotypes, which portray them as warm but not competent, whereas high status are the targets envious stereotypes (Eckes, 2002).

In the scenario of infection caused by sharing cocaine tubes, this may be, on the one hand, a less consistent black-related behavior and, on the other hand, a behavior that puts the high status target in a different status compared to other high status targets. One possible explanation is that the causal inferences used to compare high and low status were different, and therefore had led to different judgments of deservingness. While a high status being a past drug-addicted, it can be seen as an attribution of higher internal responsibility, and therefore a higher punishment, because this target has greater intellectual and social resources and therefore greater control over his or her life. The same situation in a low status target may have triggered inferences of greater external responsibility, due to lack of personal and social resources, which reduces the guilt of the target, which may have evoked a paternalistic reaction of high warmth and low competence toward the low status target. Indeed, the low status patient was treated more favorably in the prioritization for the medical treatment, yet was perceived substantially less competence than the high status patient. Thus, this pattern seems to represent a compensation effect, materialized in a low status group favoritism (Yzerbyt, Kervyn, & Judd, 2008). Moreover, it is possible that the medical scenarios

triggered different emotional reactions that in turn predicted differentiated intergroup discrimination responses (Talaska, Fiske, & Chaiken, 2008).

A complementary perspective can be found in the compensation effect hypothesis (Yzerbyt & Cambon, 2017; Yzerbyt, Kervyn, & Judd, 2008), which proposes that, when people evaluate their own and another group, the search for positive differentiation drives a favoritism toward the out-group, on one of the two fundamental dimensions of social perception, competence, and warmth. In fact, although the low status target was more favored in the prioritization of treatment, he is perceived as less competent to take care of his health. One possible interpretation is that the low status may have been perceived as warmer, but less competent, invoking in participants a paternalistic reaction, expressed in a desire to favor the low status patient and to punish the high status patient in the prioritization of treatment.

A third complementary explanation can be found in the hypothesis of moral licensing (Monin & Miller, 2001). This hypothesis proposes that in situations, which in some way accentuate the need to regulate feelings and preferences toward certain devalued groups, because these feelings and preferences call into question the image of an unprejudiced person, the individuals incur in the following strategy: if individuals can show the good deeds they have done before (e.g., favoring the low status patient in a critical issue, as the prioritization for a medical treatment), this will make them feel more confident about their image as non-prejudiced. Thus, being more confident about their non-prejudiced image, allows them to make less favorable judgments subsequently, without this bias having a negative implication on their self-image. (Merritt, Effron, & Monin, 2010; Miller & Effron, 2010; Monin & Miller, 2001). Accordingly, to feel secure that one is free from bias, it may not be necessary to actively support minority-group members; merely thinking about how one has favored those at some point may suffice. Thus, it is reasonable to think that the motivated use of compensatory behavior, allows people to feel virtuous and, paradoxically, act in an inconsistent way in subsequent appraisals of the target under evaluation (Effron, Miller, & Monin, 2012). Thus, it is possible that by overcompensating the African immigrant patient in the first two items related to the prioritization and benefit of the treatment, this had allowed themselves to evaluate more unfavorably the ability of the African immigrant patient to take care of his health and to follow the medical treatment. Thus, this is an open road to be explored in future research.

On the role of meritocracy, the results showed that a greater endorsement of Meritocracy beliefs predicts differential decisions between low and high status, however not in the expected direction. We remind that all participants were under time pressure, which suggests the use of a more heuristic processing. And as such, we expected that in this condition, and in line with previously found results, a low status unfavorable response would be more likely to occur, especially among highly meritocratic individuals. However, the likelihood of meritocracy endorsers prioritized the low status patient (*vs.* high status) was higher than the likelihood of meritocracy rejecters prioritized the low status patient. In other words, meritocracy endorsers tended to prioritize the low status over the high status., while meritocracy rejecters tended to prioritize equally high and low status targets. Overall, the results are consistent with the idea that the meritocratic beliefs promotes distinctions between social groups (e.g., Castilla & Bernard, 2010; Biernat, Vescio, & Theno, 1996; Fraser & Kick, 2000; Haney & Hurtado, 1994; Ho et al., 2002; Katz & Hass, 1988; McCoy & Major, 2007). However, in our results the status-based differential does not express a more unfavorable response toward the low status target, and thus, it is inconsistent with specific evidence suggesting a significant negative relationship between Meritocracy and intergroup outcomes (Biernat, Vescio, & Theno, 1996; Ho et al., 2002; Katz & Hass, 1988; McCoy & Major, 2007), including our results from study 1b.

An alternative explanation for our results could be interpreted under the hypothesis of the dual effect of meritocracy. The hypothesis of the dual effect of meritocracy proposes that Meritocracy beliefs can operate as *social equalizer*, bringing more social equality into the system, or a social *justifier* meaning (e.g., Levy et al., 2006), acting as a legitimizing status beliefs (Major & Kaiser, 2017) by offering a socially acceptable explanation that stabilizes existing status differences. For example, Levy and collaborators shown that the meaning of Meritocracy as a *social equalizer* is positively associated with greater egalitarianism (*see* Levy et al., 2010; Levy et al., 2005; Levy, et al., 2006) across different age and social status groups (Levy, et al., 2011). Thus, a potential explanation could be that highly meritocratic medical students show a higher egalitarianism endorsement. However, in our sample meritocracy correlates negatively with egalitarianism (r = -.24, p = .003), thus, this hypothesis does not fully explain our results.

Thus, in the following study, we propose to deepen the role of meritocracy in medical decisions. In particular, we decided to improve aspects of meritocratic priming, based on the

systematic review of meritocratic prime paradigms carried out in study 5. We will present this study in detail in the following pages.

Study 7

Overview

The results of study 6 show that meritocracy is associated with the prioritization of the patients as a function of their social status. However, and contrary to our hypothesis, the low status patient was more likely to be prioritized than the high status, particularly among medical students highly endorsing meritocracy. This result occurred even when participants were under pressure, and therefore likely using a more heuristic processing.

Thus, based on the mixed results from the previous study, the current study aimed to address two main research questions. The first research question concerns the role of meritocracy: does endorsing meritocracy systematically cause greater intolerance and discrimination toward members of low status groups? Much of the existing empirical evidence does suggest that, in general, meritocracy norm has more unfavorable than favorable implications for low status groups. In particular, descriptive meritocracy was shown to be strongly associated with greater intolerance toward low status groups. Especially in organizational contexts, it has been shown to cause greater stereotyping of women (McCoy & Major, 2007) and discrimination in monetary decisions, showing that for two equally qualified candidates, the promotion bonus was more frequently given to the male candidate, mainly in participants exposed to the meritocracy prime (Castilla & Bernard, 2010). Thus, beliefs that meritocracy exists can serve to legitimize bias and promote discrimination, at least in some contexts. However, the earlier findings apparently are inconsistent with this perspective, since those who strongly endorsed meritocracy the low status target treated more favorably. Therefore, it is important to ask under which conditions those who strongly endorse meritocracy will always express a greater intolerance or even treat low status targets less favorably.

One interpretation of those findings is that the meaning of meritocracy, as a justifier of social inequality or as a social equalizer, was not clear. Indeed, according to the dual meaning hypothesis meritocracy operates in two ways (Levy et al., 2006; see also Study 5 of this dissertation). As a justifier of inequalities, meritocracy foster cues that facilitate the expression of more negative attitudes toward disadvantaged groups and rationalizes the existence of social

inequalities, based on the idea that those who work hard, in general, succeed in life. On the other hand, meritocracy as a social equalizer brings greater equity to the system, promoting greater social tolerance.

To show the dual effect of meritocracy, Levy and collaborators (2006), randomly assigned participants to read, either a pro-meritocracy or anti-meritocracy induction article. Each article differed in that they concluded: 'people who work hard do well and have a successful life' (pro-meritocracy) or 'people who work hard are not always successful' (anti- meritocracy).' Following the prime, participants were asked to summarize the article content and completed the measures of egalitarianism and meritocracy (cued as protestant ethic work). The study participants were divided into age groups (10 years, 15 years and 21 years). The results showed that the activation of pro-meritocracy temporarily increased egalitarianism in younger participants. In contrast in the older group, the temporary activation of pro-meritocracy decreases egalitarianism, suggesting that the shift toward the justifier meaning of meritocracy occurs in more advanced stages of social development.

In studies with adults, the hypothesis regarding the legitimizing meaning of meritocracy was further developed. To show that meritocracy's implication for intergroup intolerance develops as part of an attempt to rationalize social inequality, participants read a pro-meritocracy induction article and were randomly assigned (a) to think and write about instances of others using 'people who work hard succeed' in support of their arguments (justification condition) a (b) to think and write about what 'people who work hard succeed' means (definition condition) or (c) a control condition. The results showed that exposing participants to the meritocracy-justification condition decreased egalitarianism, relative to the meritocracy-definition condition. Moreover, participants in the control condition did not differ in the level of meritocracy endorsement, relative to the other two conditions, suggesting that the *meaning* of meritocracy, not *endorsement* of meritocracy, was influenced by the experimental condition. Thus, thinking about meritocracy used in support of arguments (e.g. as a justifier of inequality) seems to contribute to greater intolerance toward members of low status groups. Following this evidence, in this study we develop a new meritocracy manipulation, focusing on the *justifier meaning* of meritocracy.

A second question arose from the previous study and concerns the role of stereotype congruency. According to the selective processing hypothesis, it would be more likely the low status to be disfavored in the stereotypically consistent condition. Indeed, according to this

hypothesis, when a stereotype is available, people used it (or make inferences based on it) as a central theme around which they organize evidence that is consistent with it. On the other hand, in stereotype-inconsistent situation evidence is less processed and is not as likely to be systematically incorporated into peoples' mental representations (Bodenhausen & Lichtenstein, 1987; Bodenhausen & Wyer, 1985). For example, in the medical decision-making context, Murphy-Berman and colleagues (1998) show that when the patient is described as being unemployed, the Black patient was given a lower health-care priority score, when compared to a White Patient. This difference disappears when the Black patient is described as being employed. Thus, one may argue that being unemployed, being more consistent with racial stereotypes, may lead to a more negative reaction toward the black target (*vs*. white target). Thus, one interpretation is that when the cause of the disease is stereotypically consistent with target's racial group, it can be more likely to evaluate the low status target more unfavorably.

In the context of study 6, the stereotypically consistent condition can be found in the description of the patient's sexual risky behavior, allegedly a cause of the infection. Accordingly, when asked about racial stereotypes in health, participants in study 6 described, among other stereotypes, the perception of sexual risky behaviors as highly associated with African immigrants. However, the results were not consistent with the stereotype-consistent hypothesis. In fact, not only did the findings reveal a tendency to compensate for the low status in the stereotypically consistent condition, but also a decrease in the effect of compensation was also found in the stereotypically inconsistent condition. Based on this mixed evidence, we addressed the role of racial stereotype consistency.

Thus, the goals of the current study are to (a) analyze patient's social status impact on the prioritization for treatment and perception of target competence; (b) investigate whether patient's social status impact on patient prioritization and perceived competence is qualified by the racial stereotype consistency; (c) investigate whether exposing participants to the pro-meritocracy justifier meaning impacts on the prioritization and perception of low status competence

Regarding the hypotheses, we expect a compensatory effect toward the low status patient, that is, the low status patient is expected to be evaluated more favorably than the high status patient. Thus, we expect a main effect of target social status. Furthermore, consistent with a selective processing hypothesis (Bodenhausen & Lichtenstein, 1987), if stereotypical consistent information fosters a less positive reaction toward the low status target, we expect the compensation effect to

decrease in the stereotypically consistency condition (*vs.* stereotypically inconsistency); thus, we expect an interaction effect between social status and stereotype consistency condition, such that in the stereotype consistency condition we expect the compensatory effect to be lower, relative to the stereotypically inconsistency condition (i.e. in a way, more negative attitudes toward the low status patient in these conditions). Furthermore, we expect the compensation effect to be reduced in the *legitimizing meaning* of meritocracy compared to the merely *endorsing* meritocracy (i.e., control condition).

Pre-testing the Meritocracy Prime

Before proceeding to the main study, we sought to test whether the new meritocratic content would be more efficient in inducing the intended effect (evidenced in a successful manipulation check). In most of the studies conducted, it was found that the activation of the meritocratic norm did not increase meritocracy endorsement. These data were in line with other research suggesting that the activation of the meritocratic norm does not increase the levels of meritocracy compared to the control condition (Day & Fiske, 2017; Levy et al., 2006). For example, Day and Fiske (2017), within an attempt to activate the perception of social mobility - a component of the meritocratic norm - showed that the activation increased the perception of social mobility in the moderate - social mobility condition, compared to the low- social mobility condition, but it was not different from the control condition. These data seem to suggest that activation of meritocracy, or one aspect of meritocracy - social mobility - does not increase meritocracy support, perhaps because it is already high at the very beginning (baseline). Thus, we created new priming, combining aspects previously analyzed in the systematic review undertaken. In this new priming, the objective was to create (a) a condition that would increase meritocracy endorsement, (b) a condition that would decrease meritocracy endorsement and (c) a baseline condition, where participants' levels of meritocracy would simply be measured. We pre-tested the pro-meritocracy condition an anti-meritocracy condition in a small sample.

Material. The materials were created based on the prime described by Levy and collaborators (2006). We developed a newspaper article purporting to convey psychological research, showing either that 'people who work hard do well and have a successful life' (pro- meritocracy) or that 'people who work hard are not always successful' (anti-meritocracy). Participants were instructed to engage in a thought exercise after reading it. Following the pro-meritocracy induction, participants were asked to think and write about why 'people who work hard succeed' in support of their arguments whereas in the anti- meritocracy participants were asked to think and write about why 'people who work hard don't succeed' (*see* Appendix C).

The results show that the stimuli were efficient in inducing a successful manipulation check. The manipulation predicted meritocracy endorsement, in that participants in the anti-meritocracy (M= 3.60, SD= 1.09) and pro-meritocracy (M=4.44, SD= .90) conditions showed significant differences in meritocracy endorsement, F (1, 35) = 6.39, p = .02. Additionally, we measured opposition to egalitarianism, and contrary to what we expected, the manipulation did not predict anti-egalitarianism, F (1, 35) = .27, *ns.*

Main Study

In the main study, we aimed to test whether activating the legitimizing aspect of meritocracy would produce a more unfavorable response toward the low status member. So we designed three experimental conditions, a pro-meritocracy condition, an anti-meritocracy condition and add a control/baseline condition. The reason for including a control condition was based on the evidence previously described in the Levy and collaborators' studies (2006), where the findings suggested that the *legitimizing meaning* of meritocracy, not an *endorsement* of meritocracy contribute to greater intolerance toward members of low status groups. Thus, in this study, we further investigated this hypothesis. Accordingly, in the current study *legitimizing meaning* of meritocracy corresponds to the pro-meritocracy condition, the *endorsement* of meritocracy corresponds to the control condition, where the participants only completed a meritocracy scale (thus, a replication of the previous study) and finally, an anti-meritocracy condition. Medical student participants received one of the experimental conditions and then were introduced to the decision making task used in the previous study. The decision-making task already included the stereotypes consistency

manipulation. Then, after the meritocracy prime, participants received either the stereotypically consistent condition or the stereotypically inconsistent condition. The order of presentation of all experimental conditions was systematically randomized, including the order of presentation of clinical cases.

Measures

Dependent variables. We used the items previously used to measure Prioritization for treatment, Target Evaluation, and Target competence.

Descriptive meritocracy. We measured descriptive meritocracy using the same scale used in previous studies (Garcia, Desmarais, Branscombe, & Gee, 2006).

SDO- Antiegalitarianism. This legitimizing ideology (Ho et al., 2012; 4 items, $\alpha = .83$) taps into beliefs about opposing to equalizing conditions among groups and treating groups equally (i.e., we should not push for group equality; we shouldn't try to guarantee that every group has the same quality of life; it is unjust to try to make groups equal; group equality should not be our primary goal.)

For the manipulation check for target prime and level of knowledge about hepatitis C, we used the same measure used in the previous study.

Method

Participants

A total of 219 medical students were recruited through server list to participate in an experiment, in exchange for a 10 € gift card. Participants were randomly assigned to a 2 (target status: low *vs*. high) × 2 (racial stereotype: consistent *vs*. inconsistent) × 3 (Prime: Pro-meritocracy

vs. Anti-meritocracy *vs*. Control) in a mixed-model design, with the first factor manipulated within participants. Data from 11 participants (7%) was removed (7 participants because of dual citizenship - Portuguese and other - and 4 because of the incomplete survey). The final sample comprised 208 medical students (66% female, Age: M = 22.60, SD = 2.09) ranging from first to sixth medical school year.

Procedure. The medical students were invited to participate in a study and were told that the research was related to their perceptions about the clinical information provided in medical cases. Participants were presented with three clinical vignettes presenting similar cases varying in the cause of hepatitis C infection. The causes include (a) unprotected sex practices, (b) shared needles in the context of drugs users and (c) shared tubes for cocaine consumption (e.g., speedballs). Participants were asked to evaluate each clinical vignette, according to earlier described dimensions. After evaluate each dimension, participants were told to imagine that they were the hospital manager who had been authorized to treat 50 patients with hepatitis C out of two hundred patients on the waiting list for treatment, and were asked to indicate the extent to which they would recommend each patient for treatment of hepatitis C. Participants were randomly assigned to one of the two order conditions: participants either see the (a) condomless sex condition first or (b) the non-injectable drug use condition. Other than that, clinical cases were similar in age and health status. Afterward, participants completed sociodemographic information and briefly debriefed.

Results

Preliminary Analysis

We conducted a manipulation check using analysis of variance (ANOVA), which revealed that the anti-meritocracy prime lowered meritocracy endorsement (M = 4.07, SD = .77) relative to the control condition (M = 4.38, SD = .82) and to pro-meritocracy (M = 4.32, SD = .90), $F(2, 171) = 2.38$, $p = .10$ $\eta_p^2 = .03$. As predicted, meritocracy endorsement is significantly lower in the anti-meritocracy prime, relatively to the control condition ($p = .04$) and lower relatively to the pro-

meritocracy (p = .11), yet meritocracy endorsement in the pro-meritocracy is not different from the control condition (p = .67). We also conduct an ANOVA to examine the effect of meritocracy prime on opposition to egalitarianism. Opposition to egalitarianism did not significantly differ among the three conditions F (2, 171) = 1.36, p =.26. Pairwise comparisons show that opposition to egalitarianism is endorsed similarly among participants in the anti-meritocracy prime (M = 2.24, SD = .11), in the control condition (M = 1.99, SD = .11) and in the pro-meritocracy (M = 2.07, SD = .11)

Table 1. Descriptive statistics and intercorrelations for study sample.

Variable	**M**	**SD**	**Meritocracy**	**SDO Antiegalitarian**
1. Prioritization - Low Status	5.98	1.14	-.00	-.08
2. Prioritization - High Status	5.36	1.23	.06	-.06
3. Target Evaluation - Low Status	5.75	1.25	.10	-.08
4. Target Evaluation - High Status	5.45	1.34	.10	-.11
5. Target Competence - High Status	4.85	1.19	-.06	**-.21****
6. Target Competence - Low Status	4.47	1.16	.10	-.10

Main analysis

Prioritization for treatment. A 2 (target status: low *vs*. high) × 2 (racial stereotype: consistent *vs*. inconsistent) × 3 (prime: pro-meritocracy *vs*. anti - meritocracy *vs*. control) mixed-design ANOVA with repeated measures on the first factor yielded a significant effect of target status F (1, 168) = 58.06, p = .000, η_p^2 = 26. The results show that the low status target (M = 5.97, DP= 1.14) received a higher prioritization than the highs status (M = 5.36, DP= 1.23). These results were qualified by the racial stereotype manipulation, $F_{target\ status \times racial\ stereotype}$ (1, 168) = 40.78, p = .000, η_p^2 = .20. Follow up pairwise comparisons show that, contrary to what was found in the previous study, in the stereotypically inconsistent condition low status target is significantly more prioritized for the treatment. F (1, 168) = 92.97, p = .000, η_p^2 = .36. In contrast and as predicted, in the stereotypically consistent condition, the low status compensation effect disappears, F (1,168) = .81, p = .37, η_p^2 = .00 (*see* Figure 1).

In addition, the results show that target status effect is not qualified by the salience of meritocracy, F (2,168) = 1.71, p = .18, η_p^2 = .02= .02, nor is the target status × racial stereotype interaction qualified by the meritocratic priming F (1,168) = .11, p= .89, η_p^2 = .00.

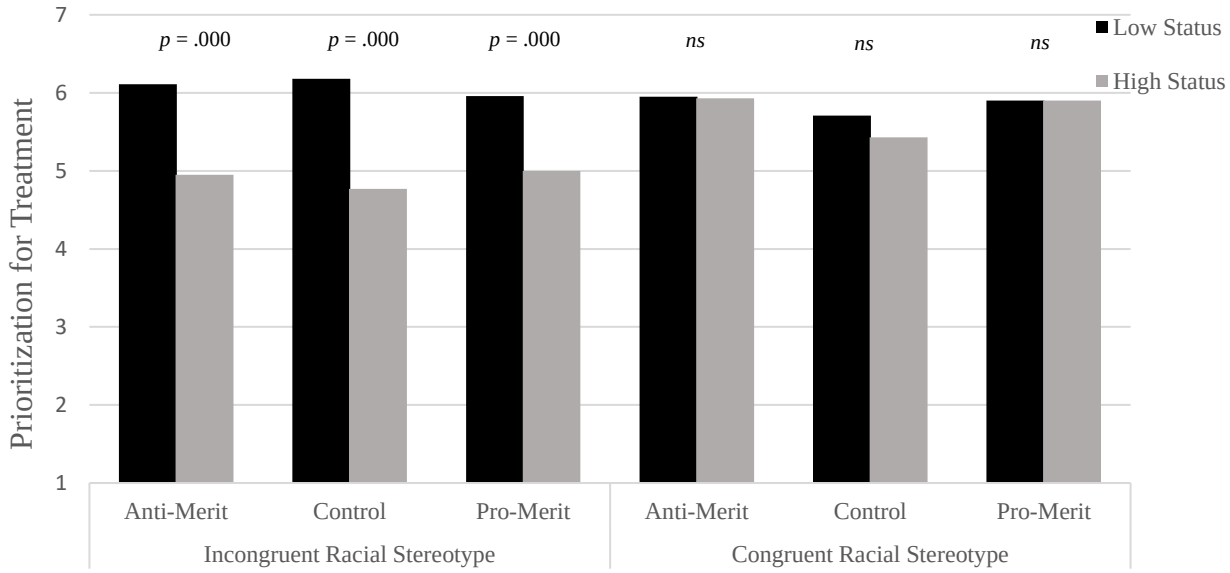

Figure 1. Prioritization of patients for a heart transplant as a function of meritocracy prime and racial stereotype condition.

Target Evaluation. We reapeted the same analysis for target evaluation. The analysis yielded a significant effect of target status F (1, 168) = 12.41, p = .001, η_p^2 = .07, and this effect is not qualified by the stereotype condition, F (1, 168) = 1.58, p = .21, η_p^2 = .01, nor prime condition, F (2, 168) = 1.80, p = .17 η_p^2 = .02, nor by both interacting, F (1, 168) = 1.44, ns. Again, low status target (M= 5.75, SD = 1.25) is perceived more favourably relative to the high status target (M= 5.45, SD = 1.34).

Target competence. The analysis yielded a significant effect of target status F (1, 168) = 22.06, p = .000, η_p^2 = 12. The results show that low status target (M = 4.86, DP= 1.19) was perceived more favourably than the highs status (M = 4.47, DP= 1.16). These results were qualified by racial stereotype manipulation, $F_{\text{target status} \times \text{racial stereotype}}$ (1, 168) = 33.49, p= .000, η_p^2 = .17. Follow up pairwise comparisons show that, contrary to what was found in the previous study,

in the stereotypically inconsistent condition low status target is significantly perceived as more competent, F (1, 168) = 52.09, p = .000, η_p^2 = .24. In contrast, in the stereotypically consistent condition status-based differentials disappears, F (1,168) = .63, p = .43, η_p^2 = .00.

With respect to the meritocratic norm manipulation, the results show that the effect of the target status is not qualified by the salience of meritocracy norm F (2,168) = .69, p= .50, η_p^2 = .01, nor is the previously described interaction qualified by the meritocratic priming F (2,168) = .36, p= .70, η_p^2 = .00.

Table 2. Patient Prioritization means and standard errors as a function of meritocracy prime and racial stereotype condition.

	Anti Meritocracy		Control		Pro Meritocracy	
	Low	High	Low	High	Low	High
Stereotypically Consistent	4.53_a (.20)	4.68_a (.18)	4.14_a (.28)	4.21_a (.25)	4.58_a (.23)	4.65_a (.21)
Stereotypically Inconsistent	5.47_a (.22)	4.74_b (.27)	5.15_a (.15)	4.28_b (.29)	5.38_a (.19)	4.22_b (.23)

Note: Means with different subscripts in the same row are significantly different at $p < .05$.

In general, and as expected the results suggest a compensatory effect of low status, particularly when stereotypes associated with risk behaviors are *inconsistent* with the racial group. That is, when the cause of infection is *inconsistent* with racial stereotypes, there is a greater preference for the low status patient, both in the prioritization for treatment and in the perception of the patient's competence. In line with our hypothesis, in the stereotypically *consistent* condition, this preference for low status patients decreased, in both patient's competence and prioritization for treatment.

We next examined whether low status favoritism decreases in the legitimizing meaning of meritocracy condition (i.e. pro-meritocracy), relative to the meritocracy endorsement condition (condition of control). To that end, we computed the difference of the prioritization given to the

low and high status[13], and then computed the following contrasts: (a) pro-meritocracy vs. anti-Meritocracy; (b) anti-meritocracy vs. control condition; and (c) pro-meritocracy *vs*. control condition.

A one-way ANOVA on favoring the prioritization of low status indicated differences among conditions, $F(2, 173) = 5.21$, $p = .006$. Relative to the anti-meritocracy (M = .39, SD = 1.03), in the pro-meritocracy low status patient was not significantly more prioritized that the high status (M = .44, SD = 1.20), t (171) = .21, $p = .83$. As predicted, relative to the control condition (M = 1.2, SD = 1.28), in the pro-meritocracy low status patient was significantly less prioritized that the high status (M = .44, SD = 1.20), t (171) = -2.64, $p = .009$, and the same patterns follows in anti-meritocracy condition (M = .39, SD = 1.03), t (171) = - 2.91, $p = .004$.

Next, we conducted the same contrasts at each inconsistent and consistent stereotypical condition, separately. The one-way ANOVA on favoring the prioritization of low status indicated no differences among conditions at the inconsistent $F(2, 82) = .96$, $p = .39$ and consistent stereotypical condition $F(2, 90) = .92$, $p = .40$, suggesting that breaking down the model decreased the statistical power. Thus, results are indicative that the small sample size has a limited statistical power to achieve a significant *p*-value. So, for theoretical reasons we look specifically at the effect size of the contrasts in the consistent stereotypical condition, the condition of theoretical interest. The results from the consistent stereotypical condition show a *small-to-medium* effect size of the meritocracy prime contrasts on favoring the prioritization of low status. The results follow the predicted direction: relative to the control condition (M = .29, SD = .85), in the pro-meritocracy low status patient is less prioritized that the high status (M = .00, SD = .74), t (88) = -1.25, $p = .22$, $g_{Hedges} = 0.36$ (IC 95%: -0.20, 0.93), and the same pattern occurs in the anti-meritocracy (M = .03, SD = .83), t (88) = -1.20, $p = .23$, $g_{Hedges} = 0.33$ (IC 95%: -0.15, 0.80)

[13] Mean Difference = low status score − high status score, with positive values indicating prioritization of low status

Discussion

Results from the manipulation check showed that our manipulation affected beliefs in a meritocracy. Exposing participants to the anti-meritocracy condition cause lower meritocracy beliefs endorsement, yet pro-meritocracy salience did not cause a greater endorsement, than the control condition. Consistent with our rationale, the degree to which individuals endorse meritocracy beliefs is not different in the *justifier meaning* condition compared to the control condition (where meritocracy was solely measured; not manipulated), probably, meritocracy endorsement is already high, and therefore the meritocracy *justifier meaning* condition does not add a substantial and significant level of support from that observed at the baseline. These findings are aligned with other research suggesting that priming meritocracy does not necessarily increase the belief in meritocracy, but instead, as emphasized in Levy's line of research (2006), priming the *justifier meaning* of Meritocracy can result in less favorable inferences toward low status groups.

Our prime manipulation did not affect opposition to equality. This finding is inconsistent with other studies (Ho et al, 2012; Levy et al., 2006) but consistent with recent research showing that priming social mobility (a core component of Meritocracy beliefs) does not significantly increase opposition to equality (Day & Fiske, 2017). For example, after learning about low social mobility people were less likely to endorse beliefs about rewards to effort and fairness of outcomes (i.e., meritocratic values, belief in a just world), yet other system-legitimizing beliefs, as opposition to equality, were not affected by the priming (Day & Fiske, 2017). Consistent with this, in our findings, the induction of a justifier pro-meritocracy or did produce differences in people beliefs about opposing to equalizing conditions among groups.

Regarding the compensation hypothesis, the results show that the low status patient is systematically favored, particularly when stereotypes associated with risk behaviors are *inconsistent* with the racial group. That is, when the cause of infection is *inconsistent* with racial stereotypes, there is a greater preference for the low status patient, both in the prioritization for treatment and in the perception of the patient's competence. In line with our hypothesis, in the stereotypically *consistent* condition, this favoritism for low status decreased, in both patient's competence and prioritization for treatment. It is possible that the activation of stereotypically consistent information associated with the low status target has decreased the motivation to appear

nondiscriminatory, showing a tendency to lower the favoring of the low status patient, systematically shown in the stereotypically inconsistent condition. In a context where the presence of anti-discriminatory norms is highly salient, this findings may inform the design of new clinical decision paradigms aiming to overcome the effects of motivational and cognitive factors on the compensation effect observed toward low status groups.

We provide initial support for the dual meaning hypothesis, suggesting meritocracy to operate in two ways in a medical setting (Levy et al., 2006). The results show that *endorsing* meritocracy cause greater favoritism toward the low status patient, relative to *legitimizing* meritocracy. This pattern is consistent with other studies suggesting that merely endorsing meritocracy does not promote greater intolerance toward low status groups (Levy et al., 2006; Rosenthal et al., 2011; Son Hing et al., 2011), particularly in cultures where people do not tend to blame others less for their disadvantage (Betancourt & Weiner,1982; Crandall & Martinez, 1996; Levy, West, & Ramirez, 2005). Also, it is possible that those genuinely endorsing meritocracy beliefs may want to make concessions under certain circumstances (Son Hing, Bobocel, & Zanna, 2002).

Importantly, as a justifier meaning, our results show that when the *legitimizing meaning* of meritocracy was salient, medical students significantly decrease the differentials in the prioritization of the low status patient, compared to the *endorsement* condition (i.e., control condition). Thus we provide initial support about the negative implication of meritocracy for low status groups likely depending on the justifier aspect of Meritocracy in the context of medical decision making. In fact, activating the *legitimizing meaning* of meritocracy did not increase the *endorsement* of meritocracy beliefs, but rather provoked an interpretative shift likely to evoke inferences about patient's deservingness in a social comparison situation (Skikta & Tetlock, 1992). Our findings do not fully show that the use of the meritocracy justifier mechanism is stronger in the face of stereotypically consistent cues, although the mean difference points in that direction. Studies with greater predictive power will be necessary to support that the use of the meritocracy justifier mechanism is greater when faced with stereotypically consistent information associated with the low status target, however, the present findings do provide preliminary evidence supporting this hypothesis. Also, a note on the anti-meritocracy condition. In participants exposed to the anti-meritocratic condition, there was a significant decrease in support for meritocratic beliefs. We, therefore, thought that this lower meritocracy endorsement would, in general, result

in a greater tolerance toward the low status target. However, this did not happen as shown in the results. The compensation effect decreased in both in the pro- meritocracy and anti-meritocracy condition. This pattern, for the first time found, deserves to be explored in future studies.

Taken together, the results obtained in studies 6 and 7 with the sample of medical students clearly show a compensation effect of the low status patient. When people are aware of the racial intent of the study are more likely to be motivated to explicitly regulate their prejudice toward disadvantaged groups, because social discourse emphasizes that good people are egalitarian and treat others fairly (Crandall & Eshleman, 2003; Dovidio & Gaertner, 1998; Dunton & Fazio; 1997; Gaertner & Dovidio, 1986; Pereira et al., 2009; Pettigrew & Mertens, 1995; Plant & Devine, 1998). In fact, the research on the attitudes of the Portuguese toward immigrants and ethnic minorities presents mixed results, with some indicating attitudes more favorable toward immigrants (Dias, et al., 2018) and others showing the existence of negative attitudes (e.g., Vala, Brito, & Lopes, 1999/2015). This phenomenon is even more evident in a medical context, where anti-discrimination regulations orient healthcare providers not to discriminate against patients on the basis of their gender, origin or ethnicity (Penner et al., 2013). In this sense, it is possible that this compensatory effect results from a motivation to control prejudice. Therefore, this aspect should be included in future research on medical decision-making.

In both studies, the social status and consistency of racial stereotypes were experimentally manipulated and meritocracy was primed, resulting in a complex experimental design with various experimental conditions. Thus the resulting complexity may constitute a limitation. This experimental design allowed us to explore several exploratory hypotheses but obviously reduced the predictive power given the ratio of subjects per experimental condition. The exploratory nature of both studies and the preliminary results found will allow, in future studies, to explore specific hypotheses, with a simpler experimental design. For example, the results of study 7 suggest exploring in more detail the role of racially consistent stereotypes with the target, namely exploring the role of stereotypes when the legitimizing meaning of meritocracy is salient.

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Chapter VI

Dissociating Migrant Status from

the Racial Category in Medical Decisions

Study 8

Overview

In the last empirical chapter, we address an important question of this doctoral thesis. Throughout earlier studies, the low status target was systematically portrayed as an African Immigrant. Thus, at this point, one might wonder to what extent the social status effect on medical decisions concerns more with discrimination against people of color than with patient migratory status. In fact, coupling the two social categories - migrant status and skin color - does not make it possible to ascertain the contribution of each category to decision-making bias. Thus, the independent and additive effects of migrant status and the target ethnicity remain to be considered. In this way, the present study aims to analyze how the cross - categorization - being an immigrant and being black - additively affects medical decisions.

Following a Social Identity approach, in-group favoritism would result regardless of the categorization salience (migratory status or race) (Tajfel & Turner, 1986). We then predict higher discrimination in regards to double outgroup categorization (black and immigrant) (Brown & Turner, 1979), as in the other conditions, there would be a cross-categorization effect (being Black and native *vs*. being White and immigrant) (Hewstone, Islam, & Judd, 1993). Thus this research innovates by articulating research on cross-categorization with migration studies applied to socially critical decisions (Costa-Lopes, Madeira, Miranda, & Moreira, 2018), particularly to the medical context.

Given the presence of anti-racist norms, according to which, for instance, Black outgroups are protected from being explicitly discriminated against (Pettigrew & Meertens, 1995; Vala, Brito, & Lopes, 1999/2015), we could predict a competing hypothesis: participants would not engage in explicit outgroup discrimination. Therefore, we use time pressure in all conditions to assure the reduction of processing resources in participants (Payne, 2005). Considering the anti-discrimination norms, limiting participants' ability to control responses will render this competing hypothesis less likely.

As such we predict a main effect of race, where Black patients will be ascribed less priority for heart transplants than White patients (H1), and a main effect of migratory status, where patients

who are immigrants will be less prioritized than the native Portuguese target (non-immigrants) (H2). And importantly, we predict that immigrant patients who are also black will be the least prioritized for heart transplants, relative to all other patients (H3).

Additionally, we include social status as a control variable. We add this variable to control for social status perception among the targeted patients, but we do not expect any differences between outgroups status, and as such we do not expect that group status to account for all the effects predicted in the three hypotheses.

Method

Design and Participants

Participants. A total of 113 participants (lay people) completed the online survey in exchange for entering a 30 euro voucher lottery. Nine participants who completed the survey but indicated a different nationality were removed and ten participants did not complete the survey. Final sample comprised 85 participants (79 % women, M_{age} = 28.72, SD_{age} = 10.26)

Participants were randomly assigned to an orthogonal design: 2 Migratory Status (born in Portugal *vs*. born outside of Portugal) × 2 Race (White *vs*. Black) with the first as a between factor and the second as a within factor. 44 participants were in the condition with immigrant patients (both White and Black) and 41 were presented the cases of the Portuguese patients (both White and Black).

Procedure. The general procedure was the same used in study 2, 3 and 4. After reading and accepting the informed consent, participants were asked their opinion regarding the level of priority to ascribe to different medical cases on a waiting list for a heart transplant. Participants were instructed to evaluate as quickly as they could within the 50 seconds provided for each one of the six patient files. Afterward, participants completed manipulation check items and sociodemographic items, and briefly debriefed.

Materials

Medical cases. In total, the materials consisted of a total of 8 medical cases of patients who needed a heart transplant (adapted from study 2, 3 and 4). Each patient file had a blurred picture of the patient, some personal data, namely name (obscured), country of birth (born in Portugal or outside of Portugal), age, family status and place of residence. Each patient file also contained information about the medical condition of the patient, time on the waiting list and symptoms. Among the six, two were critical cases. The critical cases presented the same or very similar information, varying only in our manipulations: Race and migratory status. The race was manipulated within using blurred pictures of Black (the third case) and White males (the sixth case). The order of presentation of cases was not counterbalanced to guarantee that both cases are evaluated in an intergroup frame of reference - with outgroup Black case being evaluated first than White critical case (Simon, 1995). The migratory status was be manipulated between participants with the information about the country of birth, indicating whether migrants were born in Portugal or out of Portugal.

Measures

Prioritization for transplant. This was measured with the question "Please, indicate the priority level for a heart transplant that you would ascribe to this clinical case" - which participants answered using a 7-point scale, ranging from 1 = *low priority* to 7 = *high priority*.

Social status. To measure this variable, we will present a ladder representing the different social status and ask participants to indicate where in the ladder each patient stands, using a 7-point scale, in which each scale point corresponds to one of the ladder's steps. The steps are numbered in such a way that lower numbers indicate a lower social status and higher numbers indicate a higher social status.

Manipulation checks. Given that in our manipulation the constructs of our independent variables and their operationalization are completely identical, we included manipulations checks as follows: 1) Migratory status –participants were asked wether they noticed the presence of immigrant patients with the question "In the clinical cases that were presented to you, was there any patient born outside of Portugal?" which will be answered using yes/no options; 2) Race – and wether they noticed the presence of a black patient with the question "In the clinical cases that were presented to you, was there any Black patient?" which will be answered using yes/no answer; and 3) Time pressure – to assess if participants felt pressured, participants were asked the following question: "Going back to the part where you had to prioritize some clinical cases, was there, in your case, a countdown clock?".

Demographic questions. This section included questions on gender (male, female or other), age, place of birth (born in or outside of Portugal).

Results

Preliminary Results

Results from the migrant status check showed that participants in the migrant condition saw more often a non-Portuguese target (77%) whereas participants in the native Portuguese indicate not having seen a non-Portuguese target (85%). This difference is above chance (χ^2 (1, N = 84) = 32.574, $p \leq .001$). As to the race check, 92.3% of participants indicated to have seen a black target

Main Results

Prioritization for transplant

A 2 (Race: Black *vs*. White) by 2 (Migrant Status : Born in Portugal *vs*. Born out of Portugal) mixed-design ANOVA with repeated measures on the first factor revealed that Black patients (M = 5.54, SD = 1.22) were not given a lower priority for heart transplant than White patients (M = 5.73, SD = 1.07, $F(1, 83) = 2.668$, p = .106), nor were immigrant patients ascribed a different priority level from national patients $F(1, 83) = .889$, p = .349). Importantly, the interaction term between the race and the migratory status of the patients was significant, $F(1, 83) = 7.587$, p = .007, η_p^2 = .084, d = .777 (*see* Figure 1).

As predicted the Black immigrant patient (M = 5.30, SD = 1.32) was more likely to receive the lowest priority level of all other critical patients: the Black Portuguese (M = 5.80, SD = 1.05), the White immigrant (M = 5.77, SD = 1.03) and White Portuguese (M = 5.68, SD = 1.13). We conducted a planned contrast within the interaction term, specifically we compared the priority given to the black immigrant patient (weight of -1) to all the others (1/3 to each). This contrast was significant, $L1$ = .458, SE = .206, t (109.854) = 2.215, p = .029.

Effect of the race and migratory status on the prioritization for transplant controlling the perception of group status

To rule out the hypothesis that perception of group status accounts for the previous effect, we included group status as a control variable. Particularly we expected no significant differences between the perceived status of the outgroup members. We ran the same mixed ANOVA reported above, but for patients' status. The results show no main effect of migratory status, $F(1, 83) = .687$, p = .41; and show a main effect of race, indicating that White targets (M = 4.46, SD = 1.06) are perceived significantly as having a higher social status than Black targets (M = 4.02, SD = 1.24, $F(1, 83) = 13.110$, p = .001, η_p^2 = .136, d = .95.

Importantly, the interaction term was not significant , $F(1, 83) = .675$, $p = .675$, nor was the contrast comparing Black immigrant status ($M = 4.14$, $SD = 1.32$) against the other three groups: Black native ($M = 3.90$, $SD = 1.16$), the White immigrant ($M = 4.52$, $SD = 1.71$) or the White native ($M = 4.39$, $SD = .95$), $L1 = .135$, $SE = .213$, $t\ (107.567) = .635$, $p = .527$.

To further support our claim that status does not fully explain the effect of the race × migratory status interaction on the level of priority given to patients, we rerun the 2 (Race: Black *vs.* White) by 2 (Migrant Status : Born in Portugal *vs.* Born out of Portugal) mixed-design ANOVA with repeated measures on the first factor mixed ANOVA including as a covariate the difference between White patients' status and Black patients' status. Maintaining the previous pattern, the results show no main effects of race or migratory status on the prioritization for heart transplant ($Fs < .2$) yet, importantly, the results show a significant race × migratory status interaction when predicting priority for the transplant, $F(1, 82) = 7.710$, $p = .007$, $\eta_p^2 = .086$, showing that being an immigrant and black is more likely to be treated unfavorably, relative to any other of the remaining cross categorization. In other words, when you are an immigrant and black the probability of being treated unfavorably is significantly higher than when you are a White immigrant or native Black.

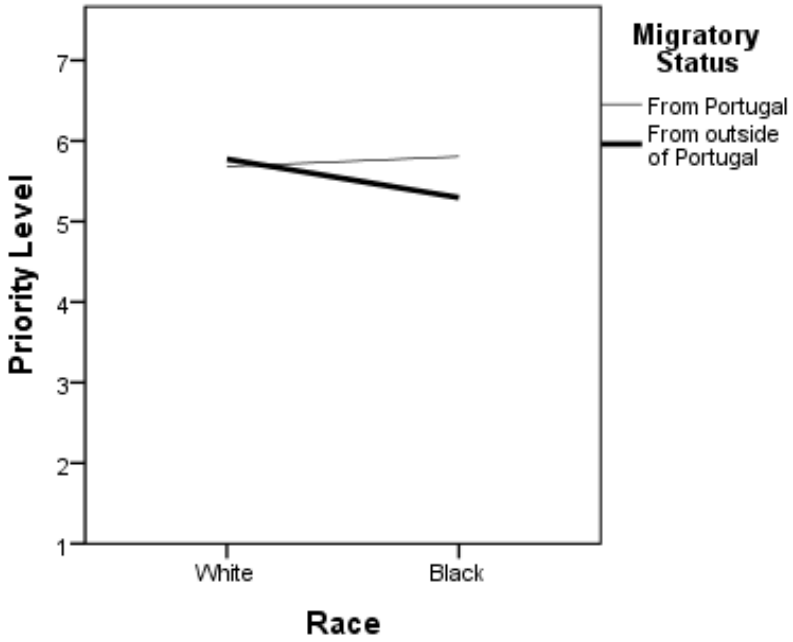

Figure 1. Mean priority level for heart transplant attributed to patients as a function of migratory status and racial category.

Discussion

Study 8 was designed to analyze how cross-categorization - being an immigrant and being black - interactively affects medical decisions. Consistent with the hypothesis, being an immigrant and black increases the likelihood of being treated more unfavorably, relative to any other of the remaining cross categorizations (being Black and native *vs*. being White and immigrant *vs*. being White and native). The novelty of this study lies in the ability to dissociate the effect of the racial category from the migratory status, showing that, in the context of migration studies, the consideration of the racial category is not only important but as the findings show, ultimately contributes to immigrants social inclusion. Specifically, being a white immigrant and being a Black immigrant affects the target disproportionately, and this is due to the skin color effect, which significantly increases the likelihood of an immigrant being treated more unfavorably.

Moreover, social status did not explain the result described above, in that the interaction term of migrant status and racial category remained significant after controlling for target's social status perception. Nevertheless, it should be noticed that we found evidence of an especially positive association of higher social status for White targets and lower social status for Black targets. In the present study, we find consistent evidence of a positive association for high social status that is especially pronounced when perceiving White (*vs*. Black) targets.

This finding highlight the importance of examining evaluations based on migratory status and racial categories when both categories are simultaneously available, and importantly, offer an experimental-based intersectional approach to understand how migratory status and race affect more broadly immigrants' integration in the country and immigrants' health in particular.

Chapter VII

Discussion

Overview of the findings

The overall goal of the thesis is to contribute with empirical support for the understanding of the conditions that allow the persistence of discrimination toward low status groups - particularly, immigrant groups, as African immigrants - in terms of medical decisions. Specifically, in seven studies, organized in four empirical chapters, we examined the impact of patient attributes, specifically the patient's social status, in medical decisions involving the allocation of critical and expensive medical resources. We further examined the role of meritocracy in the relationship between the patient's social status and medical decisions, ascertaining whether priming meritocracy impacted more unfavorably the low status target. Additionally, we explored conditions likely to increase the hypothetically adverse effect of meritocracy on decisions toward the low status target, specifically (a) the perceived patient responsibility over the disease and (b) time pressure. We extended the previous empirical studies into the medical field, investigating, among medical students, whether the salience of meritocracy predicted, among various outcomes, the recommendation for a medical treatment and elicited explicit racial stereotypes in the medical context. And finally, in the last study, we addressed an important limitation of earlier studies by decoupling the effect of migrant status from targets' race in medical decisions.

In the first empirical chapter (Chapter II) we presented two studies on whether decisions toward the low status target, cued as an African immigrant, were affected by the presence (vs. absence) of different diseases, and by a social categorization process (group frame of reference: intergroup vs. intragroup). Furthermore, we investigated whether meritocracy beliefs accounted for the status-based differences in the prioritization of patients for a heart transplant.

The results showed the low status target was significantly less recommended to receive a heart transplant than the high status target, particularly when presenting the heart transplant recipients with different diseases (*vs*. same disease). This evidence is in line with research indicating a pervasive bias toward low status groups in different aspects of medical care (Fiske & Dovidio, 2012; Major, Mendes, & Dovidio, 2013; Penner et al., 2013 Smedley et al, 2003; van Ryn, et al., 2011).

Moreover, the frame of reference was important, under certain conditions. For example, when the low status was presented *before* the high status (intergroup comparison), presenting the

heart transplant recipients with the same disease, led to a slight compensation toward prioritizing the low status patient (*vs*. high status). It is possible that, in the absence of a specific aspect of the situation that would allow a differential treatment between patients, participants in this condition, being aware of the interracial nature of the study, may have strategically modified their responses in a direction opposite to the perceived bias (Wegener & Petty, 1997; Wilson & Brekke, 1994). Because, in contrast, the condition that presented medical cases with different diseases offered the possibility to participants - probably with more negative feelings toward the low status patient - to prioritize the patients differently, without this being directly attributed to participant's own bias (Gawronsky et al., 2012).

The frame of reference was less important when presenting equally qualified heart transplant recipients with identical diseases. The results indicated that differential decisions were more likely to occur when high status patient was seen with a *heart failure* medical condition, and this effect is independent of the frame of reference presented to participants (low status presented *before* the high status vs. low status presented *after* the high status). It seems that the ingroup bias was more due to the salience of the disease associated with the high status and less due to a basic categorization processing.

Social categorization is a key process that should be considered in the broader understanding of intergroup relations (Park & Judd, 2005). But it is not the only one. In fact, there are also other processes, namely processes stemming from fundamental and ideological beliefs that regulate social life (e.g., Billig, 1982), with significant implications for intergroup dynamics (Pratto et al., 1999). Indeed, study 1b showed that when analyzing one's own meritocracy beliefs, intergroup bias varies significantly as a function of the categorization process. Specifically, when the intergroup comparison is salient, the out-group patient (also cued as the low status patient) is significantly less recommended to receive a heart transplant than the in-group patient (cued as the high status patient). Importantly, the intergroup bias resulting from the categorization process was stronger for meritocracy endorsers. According to our predictions, prioritization of low status target would vary across the level of meritocracy endorsement, most likely when the intergroup comparison was salient. The results showed that highly meritocratic individuals attributed to a greater extent a higher priority to the high status target, particularly, when the intergroup comparison was salient. These findings are consistent with previous research on the consequences

of meritocracy for high status groups, particularly on the reciprocal relationship between group-interest and Meritocracy beliefs (Fraser & Kick, 2000; Haney & Hurtado, 1994; Jost, 2001).

Chapter III described three studies investigating the impact of meritocracy on medical decisions toward low status targets, and particularly, the conditions under which meritocracy norm can have adverse consequences for the low status target. In the first study, we tested predictions interrelating meritocracy and causal attributions. The experiment manipulated the salience of meritocracy norm (vs. neutral) and the perceived responsibility for the disease (high *vs.* low). We hypothesized that, when framing a high responsibility, participants primed with the meritocracy norm would evaluate targets differently as a function of social status. Specifically, low status patients would be seen as more responsible for the illness condition and therefore, less likely to be recommended for a heart transplant. In contrast, when framing a low responsibility disease, such as a genetic-based disease, participants primed with meritocracy would not make significant status-based differentials, therefore, in a low responsibility disease condition we expected the low status patient to be equally prioritized for transplant as the high status patient.

The results showed that in the condition of low responsibility, low status prioritization was not qualified by the meritocracy prime. Whereas in the high-responsibility condition, meritocracy prime predicted status-based differentials in the decision. We hypothesized that low status patients who are perceived as responsible for their own illness would receive a lower priority for a transplant. However, our results revealed an overcorrection: low status patient received a higher priority for transplant than the high status patient. It's possible that, because participants became aware of study intent (e.g. ethnic-racial issue), having sufficient time and motivation to think beforehand about the consequences of their decisions (e.g. discrimination), led to correct their responses in a direction opposite to the perceived bias (Dovidio, Kawakami, Johnson, & Howard, 1997; Fazio, 1990; Wilson et al., 2000). Thus in study 3 we hypothesized that under time pressure, low status patients would be less likely to be recommended for a heart transplant, particularly when the meritocracy norm was salient. The results showed that limiting cognitive resources changed the response toward the low status target. In the high-pressure condition, the low status patient did receive a lower recommendation for transplant, relative to the high status patient. As predicted, this interaction was qualified by the meritocracy prime, in that, when meritocracy was salient, participants in the high-pressure condition were more likely to assign a lower priority level to low status, when compared to the high status target. In contrast, the pattern found in the low-pressure

condition replicated the compensation effect one found in study 2, or in other words, the low status patient received a higher priority for transplant than the high status patient. In study 4 we further investigated whether the compensation effect found when meritocracy was salient, could be explained by individuals' motivation to suppress negative attitudes toward the low status target. Thus, study 4 investigated whether the motivation to control for prejudice (Plant & Devine, 1998) would account for the previous pattern. We hypothesized that in the low-pressure condition, participants would be more motivated to control prejudice, which in turn would lead to favor the low status over the high status target. In the high-pressure condition, we expected motivation to control prejudice to be no longer present. As predicted, the results suggested that, in the low-pressure condition, subjects engaged in motivated reasoning to control prejudice, which in turn, decreased the low-high status distinctions on the confidence on the benefit of the transplant for the target. However, when under high pressure, the cognitive processing necessary to control the prejudice was no longer required, thus resulting in evaluations that are not necessarily more generous toward the low status target. Thus, the findings suggested that when meritocracy was salient, the compensation effect found appears to be conscious.

In chapter IV we present the results from a systematic review aimed to (a) summarize the content of the different prime tasks; (b) summarize prime manipulation checks effectiveness, and (c) analyze whether priming Meritocracy predicted less favorable outcomes toward low status groups. Results across studies show that, despite the existing differences in the components highlighted, the salience of any of the Meritocracy dimensions facilitates the use of internal causal attributions, negative evaluations and stereotyping toward low status groups, negatively affecting decisions involving low-status group members, particularly in organizational contexts.

Thus, based on the extensive systematic analysis of the content of meritocracy activation, we proceed with research on the role of meritocracy in medical decisions, extending the decision -making paradigm to more familiar and intervening participants, the medical students. The decision paradigm included only (fictitious) patients holding a high degree of personal responsibility for their predicament. We added an extra layer, examining to what extent medical students would select patients holding a high degree of personal responsibility differently based on stereotypical consistent *vs*. inconsistent information.

In the first study with medical students (study 6) the results showed a compensation effect on the low status patient, particularly on the prioritization for the medical treatment. This low

status favoritism was particularly strong in a situation of stereotypical inconsistency. It is important to stress that this differential, not only disappears in the target's competence dimension, but also reverses: the low status patient is evaluated as less competent, relatively to the high status.

This complex pattern of mixed preferences and evaluations toward the low status target can be understood according to several hypotheses. In the first discussion we proposed to look at these results in the light of the ambivalent-stereotypes hypothesis (Fiske et al., 2002), suggesting that in the scenarios presented, the low status may have been perceived as warm but not competent, and the high status may have been perceived as less warm, but competent and hypothetically with more resources to avoid their medical situation.

Additionally, the results of study 6 show that meritocracy is associated with the prioritization of the patients as a function of their social status. However, and contrary to our hypothesis, the low status patient was more likely to be prioritized than the high status, particularly among medical students highly endorsing meritocracy, regardless of the stereotypical condition presented (consistent *vs*. inconsistent).

Based on the mixed evidence found in study 6, in study 7 we replicated the same medical decision paradigm and the stereotyping manipulation. Additionally, we primed the legitimizing meaning of meritocracy. According to our hypothesis, medical students prioritized low and high status patients differently, showing a preference for the low status patient. In contrast with study 6, but consistent with our hypothesis, this preference is explained by the stereotypical inconsistent condition, where the low status is significantly favored over the high status patient. In contrast and as expected, this difference disappears when the low status patient is portrayed with consistent stereotypical cues. This is in line with the selective processing hypothesis (Bodenhausen & Wyer, 1985). According to this hypothesis, evidence that corroborates stereotypic expectations receives more processing (attention and elaboration), whereas contradictory evidence is cognitively neglected (Bodenhausen, 1988). In the stereotypically inconsistent condition, it is possible that in that condition, the systematic preference for low status occurs because participants process the information in a less elaborate manner since it is not consistent with the stereotype associated with the target's racial group. In contrast, because in the stereotypically consistent condition, the stereotypical inference made from patient's behaviors is consistent with group-level stereotypes (Higgins & Bargh, 1987; Pratto & Bargh, 1991; Wyer & Gordon, 1984), the compensation

previously found disappears. Thus, we have inconsistent results between study 6 and study 7, regarding the conditions that favor the low status patient. Nonetheless, the results of study 7 show more clearly that in the stereotypically inconsistent condition there is a compensatory effect, and, importantly, this compensation disappears when the black target is presented in a stereotypically consistent manner.

Moreover, Study 7 replicated other pattern found in study 6. Both experiments showed that Meritocracy endorsers compensated the low status target (vs. high status). Yet study 7 showed that when the *legitimizing meaning* of meritocracy was salient, the low status target was not more prioritized nor seen as more competent than the high status target; thus, the compensatory effect disappears. It is possible that the salience of the *legitimizing meaning* of meritocracy has reduced the paternalistic reaction toward the low status patient, and the need for a positive differentiation (Yzerbyt, Kervyn, & Judd, 2008). More research is needed to investigate whether the *legitimizing meaning* of meritocracy decreases the need to appear non-discriminatory.

Our findings also provided preliminary evidence of a shift in meritocracy's intergroup meaning. Merely thinking and writing about why 'people who work hard succeed' affected prioritization of low status target. Relative to those who solely express their level of meritocracy *endorsement* (i.e., control condition), those who wrote arguments supporting meritocracy beliefs (i.e., *legitimizing condition)*, showed no preference for the low status target. Thus, in addition to extending the work on social status effects on medical decision, by analyzing the role of meritocracy on medical decisions involving members of low status groups, our findings offer further evidence of how the *legitimizing* aspect of meritocracy beliefs, and not the *endorsement per se*, has less favorable consequences for members of low status groups.

In the last empirical chapter, we addressed a potential limitation of the thesis by dissociating the target's racial category from migratory status. Consistent with our hypothesis, being an immigrant and black significantly increases the likelihood of an immigrant being treated more unfavorably. Specifically, being an immigrant and black increases the likelihood of being treated more unfavorably, relative to any other of the remaining cross categorizations (being Black and native *vs*. being White and immigrant *vs*. being White and native).

In the present thesis, we aimed to investigate whether patient's characteristics (i.e., social status) affect medical decisions and whether meritocracy disproportionately impacts members of

low status groups, as the case of African immigrants. The results from our empirical studies converge to suggest priming meritocracy impacts on intergroup decision-making. The impact of meritocracy directly affects low status members, at least under certain conditions. Empirical evidence of the negative impact of meritocracy on low status members is greater when the cognitive resources of participants are limited, and when the legitimizing aspect of meritocracy is activated. Specifically, when participants are less motivated not to appear prejudiced, the meritocracy salience disproportionately affects the low status patient, resulting in a less favorable outcome for the low status patient.

Theoretical and Practical Contributions and Implications for Social Policy

When deciding about prioritizing patients for a treatment or a medical procedure, providers rely on medical evidence and on the symptoms expressed by patients. The decision-making process itself is complex, as providers have to combine clinical information with symptoms described by patients who share common characteristics, including race and ethnicity (Dovidio & Fiske, 2012).

However, irrespective of the degree of complexity involved in the medical decision, a factor that seems to both directly and indirectly impact medical outcomes is patient's social status (Fiske & Dovidio, 2012; Major, Mendes, & Dovidio, 2013; Penner et al., 2013). Particularly, patients of low status groups tend to receive less favorable medical outcomes, relative to patients of high status groups (Bogart, Catz, Kelly, & Benotsch, 2001; Burgess et al., 2008; DiCaccavo, Fazal-Short, & Moss, 2000; Drwecki, 2001; Green et al, 2007; Ponterotto, Potere & Johansen, 2002; Sabin, Rivara, & Greenwald, 2008; Stepanikova, 2012; Schulman et al., 1999; Thamer et al 2001).

In Portugal, only in the recent years researchers from different backgrounds have started to document evidence on inequalities in patient care, particularly toward patients members of immigrant groups (Dias et al., 2011; Dias et al., 2012; Dias et al., 2018; Fonseca, Silva, Esteves & McGarrigle, 2009; Fonseca & Silva, 2010; Padilla et al., 2013; Padilla, Plaza & Freitas, 2016). The existing evidence has privileged immigrants' access to primary HIV prevention care (e.g.

Matos, Gonçalves & Gaspar, 2004); access to maternal and child health (e.g. Machado et al., 2009); access to sexual and reproductive health services (e.g, Alarcão et al., 2008); and access to mental health care (e.g, Pussetti, 2010). Other studies addressed more generally, the determinants affecting the access and quality of medical services (e.g., Dias, Severo e Barros, 2008). Thus, the existing evidence is limited regarding other aspects of patient care, directly associated with the provider, such as perceptions and beliefs about patients attributes (e.g., patient ethnicity or socio-economic status). And, to our knowledge, research is even inexisting concerning medical decisions, particularly decisions dealing with critical medical procedures or expensive medical treatments. Considering that the available information on health and immigration research, besides being limited, is scattered among different disciplines of knowledge (Fonseca, Silva, Esteves & McGarrigle, 2009; Oliveira & Gomes, 2018), the present thesis offers an important socio-psychological perspective for explaining differential medical decisions linked to immigration issues in Portugal.

A large body of international evidence has been documenting status-based inequalities in healthcare. A substantial part of the research has been dedicated to investigating how provider bias and stereotyping explain the existing status-based inequalities. Additionally, some studies begin to investigate ideologies that contribute to the maintenance of differential treatment that disadvantages low status groups.

This thesis offers a complementary perspective by introducing the contribution of social norms to the inequalities in the health context and, in particular, by extending the investigation of Meritocracy - a norm that regulates most Western countries - to medical decisions involving the allocation of critical resources, such as transplants or high-cost life-saving medical treatments.

Theorizing on the antecedents of the expression of prejudice and racial discrimination have postulated that, in general, negative attitudes or feelings toward low status groups, such as immigrants or blacks, depends on the normative context (Gartner & Dovidio, 1986; Katz & Hass, 1988; Katz, Hass, & Wackenhut, 1986). According to Katz and colleagues, people's reactions towards a low status target, as the Blacks, are ambivalent because they possess contradictory beliefs and feelings toward these groups. Thus, the direction and form of the response (favorable or unfavorable) in an interracial situation depend upon the social context. Theorizing on the role of meritocracy has contended that in general, meritocracy is a social norm that favors the expression of prejudice and discrimination. (Kinder & Sears, 1981; McConahay, 1986; Katz &

Hass, 1988; Vala & Lima, 2002). Therefore, assuming meritocracy as a social norm that favors inferences and negative feelings toward low status groups, it would be expected that the salience of the meritocracy in a intergroup comparison situation - operationalized in a medical decision paradigm, with the evaluation of several patients on the waiting list - would be sufficient to produce a more unfavorable treatment for low status individuals. In fact, several studies had empirically shown social contexts in which the activation of the meritocratic norm produced more negative outcomes toward low status groups, particularly women and Blacks (Castilla & Bernard, 2010; Ho et al., 2002; Katz & Hass, 1988; McCoy & Major, 2007). Our findings offer further explanations about the conditions more favorable to the occurrence of an adverse effect of the meritocracy toward a low status group, in medical settings.

The novelty of this thesis is underscored by the fact that studies showing impact of meritocracy toward low status groups in a medical setting are, at least to the best of our knowledge, limited. There is work showing that, among low status groups, endorsing meritocracy provides a greater sense of control (McCoy, Wellman, Cosley, Saslow, & Epel, 2013); yet, in the long run it is associated with lower self-esteem, self-blame and depression (Major, Kaiser, O'Brien & McCoy, 2007), and also higher blood pressure (Eliezier, Townsend, Major & Mendes, 2011), particularly when low status targets face discrimination.

Thus, the current thesis complements the existing research, offering a broader understanding of the role of the meritocratic norm in an applied context, such as the case of medical decisions. More specifically, this thesis presents some of the conditions that could potentially promote less favorable outcomes for members of a low status group, such as African immigrants.

The health context has intrinsically distinct features from other contexts, such as the organizational context, where the adverse effects of meritocracy were found to be more pervasive toward low status groups, as women and blacks. Given the presence of anti-discriminatory norms in healthcare settings, according to which, for instance, members of low status groups are protected from being explicitly discriminated against (Pettigrew & Meertens, 1995; Vala, Brito, & Lopes, 1999/2015), it is possible that the temporary activation of meritocracy, a norm that promotes intolerance and dislikes toward low status groups, may have caused tension, amplifying the direction of the response toward low status targets (Katz, Wackenhut, & Hass, 1986). The results of this thesis showed that, in general, the responses toward the low status target are more amplified than the responses to the high status. In other words, the direction of the response, in the positive

(favoring) or negative (disfavoring) orientation, is more ambivalent toward the low status throughout the various studies conducted.

In chapter III, studies 2 and 3 provide preliminary evidence that the temporary activation (vs. absence) of Meritocracy affects status-based differentials on medical prioritization for transplant. Moreover, we provide evidence that people inhibit the direct effect of explicit bias, when we introduced a time pressure manipulation and showed that under pressure, the low status target is significantly less likely to be prioritized, particularly when meritocracy is temporarily activated; and more likely to be prioritized when meritocracy is absent. Study 4 provided further evidence on the mechanisms supporting a compensation toward the low status target, showing that when Meritocracy is temporarily salient, the low status compensation is fueled by a motivation to control prejudice, particularly when people make decisions under no pressure. This result seems to show that, even if in other contexts the simple activation of the meritocratic norm directly produces a more unfavorable result compared to the low status individuals, in a medical context, this effect is hindered by personal motivation to regulate one's own prejudice.

This motivation to regulate one's own prejudice seems to be even more evident in subsequent studies, conducted with medical students, systematically exposed to the non-discriminatory norm that prevents low status individuals from being explicitly discriminated. Accordingly, Chapter V extends the medical decision paradigm to more experienced and intervening participants in clinical settings, but at the same time more exposed to non-discriminatory norms (Penner et al., 2013). Thus, studies 6 and 7 show a clear compensatory effect of low status, probably motivated by the need to not appear prejudiced, resulting from the highly salient anti-discriminatory norm that characterizes health care settings. Importantly, the low status compensation effect disappears when medical students are temporarily primed with the legitimizing meaning of meritocracy.

Is meritocracy a malleable norm whose content can be shaped by individuals in ways that satisfy their social motivations? Meritocracy, when construed as *social equalizer*, allows people to achieve higher status, reducing discrepancies between groups' outcomes (e.g., Levy et al., 2006); as a *justifier,* however, offers a socially acceptable explanation, operating as a legitimizing ideology that entrenches existing inequalities (Major & Kaiser, 2017; Jost & Hunyady, 2002; Major et al., 2002; Levin, Sidanius, Rabinowitz, & Federico, 1998; Sidanius & Pratto, 1999). Accordingly, Meritocracy as a status-legitimizing belief (SLB) encompasses explanations about

people's status within a social system, asserting that status differences in society are based on merit (Levy, West, Ramirez, & Karafantis, 2006; McCoy & Major, 2007), thus, as a status-legitimizing belief, Meritocracy is used to interpret situations in which status-based differentials can be justified (Jost & Hunyady, 2005).

Findings from study 7 seem to indicate a certain malleability in the application of meritocracy to medical decision-making. In fact, participants in the meritocracy justifier condition were found to shift, lowering their preference for the low status target, relative to the control condition. Thus, our findings show that people can endorse meritocracy as an egalitarian stance concerned with reducing discrepancies between groups' outcomes; and yet, use it to legitimize racial preferences in situations of allocation of medical resources involving high and low status targets. Possibly, when people can infer personal responsibility for the state of illness of others, meritocracy as a principle of procedural justice can facilitate inferences of merit or deservingness, legitimizing existing inequalities (Deutsch, 1975; Jost & Hunyady, 2005; Major & Kaiser, 2017; Skikta & Tetlock, 1993; Tyler & Smith, 1998). Studies 3, 4 and 7 show that this inferential process is less favorable toward the low status target. Specifically, in study 3 we show a direct evidence of impacting more negatively the low status patient and studies 4 and 7 show a reduction in the compensation effect toward the low status target.

Findings from study 7 support the general pattern found in other studies regarding the racial stereotypes consistency hypothesis (Bodenhausen & Lichtenstein, 1987; Correll et al., 2007; Freitas, 2018). Medical students behave in a less favorable way when making a decision that is consistent with the stereotypes of Blacks (e.g., sexual risky behaviors) and White (e.g. recreational drug use) and react in a more favorably way in making a decision that is inconsistent with the stereotypes of Blacks.

Finally, in the last empirical chapter, we provide direct evidence of how migrant status and racial category contribute interactively to unequal medical decisions: being immigrant and black increases the likelihood of being treated less favorably, relative to being immigrant and White or native and Black. The most recent statistics on the integration of immigrants ranks Portugal in 22nd place (Migration Integration Policy Index, 2015), suggesting that immigrants are at a higher risk of being discriminated against, relative to native Portuguese. This study offers new insights by

showing that skin color is important when estimating the likelihood of an immigrant being discriminated against in a medical context.

At a larger scale, the contribution of this thesis is in line with the recently recommendations on Migration and Health (Abubakar et al., 2018; World Health Organization, 2010/2014), emphasizing a need to uncover individual-level processes concerning the contributions of both patients and provider to health inequalities, and societal-level processes, namely social norms and ideologies that contribute to the maintenance of those inequalities (Major, Dovidio, & Link, 2018). Particularly, the socio-psychological framework of this thesis allows us to understand how patient attributes and socionormative factors can disproportionately affect immigrant groups in decisions with serious implications for people's lives. Consequently, it offers a novel and complementary perspective for understanding and tackling health inequalities, in particular, those at the intersection of migration and race/ethnicity.

There are various ways to reduce health inequalities. One way to reduce health inequalities associated with the patient's characteristics (e.g., membership group: migrant, black) is precisely through the knowledge of the degree of implicit bias existing in relation to this social group. Therefore, the first recommendation is to evaluate the racial climate, investigate reports of subtle or overt discrimination and unfair treatment. As the results of this thesis have shown, social norms can act as mental schemas influencing behavior, thus the second recommendation is the identification of formal and informal norms that ignore or support racism in the medical context. Finally, given the lack of systematic monitoring of the health inequalities associated with migrants, the third recommendation is to create a monitoring system in which the processes and outcomes of care can be compared by patient ethnic/racial category.

Another way is through the understanding of the relations between implicit bias and clinical outcomes. Understanding whether and how implicit bias might be related to the processes and outcomes of clinical care is fundamental to a) implement interventions aiming to reduce the effects of implicit bias on processes of care and clinical outcomes and b) evaluate training that ensures that clinicians have the knowledge and skills needed to prevent racial biases from affecting the quality of care they provide. The training includes self-awareness regarding implicit biases, perspective-taking skills, and emotional regulation skills.

Limitations and Future Research

Any research piece trying to understand complex phenomena, such as the one studied in the present thesis, must consider its potential difficulties and limitations in providing adequate explanations and theoretical reasoning, while also considering potential methodological challenges. Thus, we are aware that this work has several shortcomings that are worthy of consideration and reflection as a means to guide further research efforts.

First, throughout seven studies we have invariably kept the same target - a patient born in Cape Verde - as a representative of the African immigrants' group, which throughout the thesis we designated as a low status group (*see* Chapter 1 on the decision to choose the group of Cape Verdean immigrants). Being aware of the conceptual and methodological challenges associated with the concept of immigrant (e.g. nationality, country of origin), we maintained the decision to operationalize the variable country of birth (or country of origin), given that this is recommended as the best variable, compared to other variables identifying the group of immigrants (e.g., nationality) (Rechel et al., 2012). However, this decision may limit the generalization of the results to other African groups (such as Guinea-Bissau), as we do not know if using another African group to represent the low status group the results obtained would be similar. The results of study 8 give us relative confidence about the effect of skin color and migratory status on medical decisions, suggesting the existence of a similar effect, if the group represented was from another country, like Guinea Bissau. However, we point out the possible existence of nuances toward other low status groups, namely groups of white immigrants, but perceived with low status (e.g., immigrants from Eastern Europe) or immigrants from Brazil, another country with historical relations with Portugal, where the perception of social status may vary according to phenotypic traits. We, therefore, propose extending this line of research to other immigrant groups that are representative of low social status. Further research should address this issue by including other types of target groups and considering other national contexts in which the low status groups may not be people of color.

Second, regarding the operationalization of the African immigrant category to designate the low status group, a conceptual term in the area of social psychology in general, and of intergroup relations in particular, it is possible that in other fields of knowledge this theoretical

interchangeability (i.e. between the immigrant and low status categories) may invite one to question the appropriateness of the term, within the scope of Migration studies. The decision to cue the African immigrant as a low status group was based on the generalized perception (given the absence of studies, surveys and in-depth analyses on this topic) that the racially or ethnically differentiated immigrant population is in a more economically disadvantaged position; they have lower qualifications and consequently lower wages. Hence, likely to hold a lower social position in society. Nonetheless, this implicit assumption should be explicitly addressed in further research.

In a different vein, we used the experimental method as a means to test our main hypotheses because we sought to identify causal mechanisms. The experimental research design has advantages for studies aiming at identifying causality relationships because they are usually considered the strongest of all designs in internal validity (Brewer & Crano, 2014). Still, we argue for the need to triangulate and integrate the experimental method with other methodologies (Smith, 2014). In further studies we suggest carrying out interviews and focus groups to enrich aspects of this work, specifically: a) specification of aspects of meritocracy beliefs relevant to the national context; b) clarification of dimensions about the medical decision-making process that might be more vulnerable to bias; and c) specification of the content of racial stereotypes in health.

In all the studies conducted, the main focus was on the behavioral dimension, where decision making was one of the main dependent variables of interest. It is known, however, that the evidence on the effect of the provider bias on clinical decisions is mixed with studies failing to find effects of prejudice on providers' treatment decisions (Haider et al., 2011, 2015a, 2015b; Hirsh, Hollingshead, Ashburn-Nardo, & Kroenke, 2015). By delimiting the focus of interest in the behavioral dimension, this research leaves unanswered the impact of patient's social status and meritocracy beliefs on other evaluative, cognitive and attitudinal dimensions, such as stereotypes and implicit attitudes, preceding the decision-making process. In a different vein, the quality of the relationship between providers and patients must also be considered within this framework.

Furthermore, it is also important to acknowledge that a general limitation of the dissertation concerns the use of lay people to investigate medical treatment decisions. The use of laypeople to test theoretical hypotheses is, at least in the field of social psychology, a relatively common procedure, and important before extending into more applied research. But this procedure is not unique to psychology. Indeed, in health research, several researchers investigate non-medical

factors (i.e., social preferences) impacting on allocation of medical resources with lay samples (see Furnham, Ariffin, & McClelland, 2007; Ubel et al., 2001; Wittenberg, Goldie, Fischhoff, & Graham, 2003; Fowler, Berwick, Roman, & Massagli, 1994; Stanton, 1999). One reason is that health care providers are as vulnerable to bias as laypersons (FitzGerald & Hurst, 2017). Future research can investigate in more detail participants with a higher degree of medical expertise, such as doctors and other health professionals.

Moreover, when participants are aware of the racial intent of our studies, they are more likely to be motivated to explicitly regulate their prejudice toward disadvantaged groups, because social discourse emphasizes that good people are egalitarian and treat others fairly (Crandall & Eshleman, 2003; Dovidio & Gaertner, 1998; Dunton & Fazio; 1997; Gaertner & Dovidio, 1986; Pereira et al., 2009; Pettigrew & Mertens, 1995; Plant & Devine, 1998). Thus, understanding the role of social norms, such as the anti-racist norm, for our topic of interest is a valuable future line of research worth investing in.

Additionally, additional work is needed to fully analyze the conditions that favor bias in socially critical decisions, such as the allocation of medical resources. The malleability of meritocracy as a set of social beliefs may have other implications besides those investigated throughout this thesis. Central to this framework is the notion that Meritocracy as a norm regulating social relations in most Western countries, it is likely to have significant intergroup implications. For example, members of low status groups may be inclined to see their social position as legitimate and thus be accepting, and high status group members may logically infer low status groups as individually responsible for their disadvantaged position in the social system (McCoy & Major, 2007; Rüsch, Bodenhausen, & Corrigan, 2010). In addition, Meritocracy beliefs seem to operate as a facilitator of intolerance toward low status groups, by rendering access to attributional, stereotypical and negative inferences about specific social groups (Biernat et al., 1998; Costa-Lopes et al., 2017; Ho et al., 2002) and importantly can act as mental schemas influencing behavior (Pratto et al., 1999). Thus, new research horizons arise addressing how meritocracy as a legitimizing social norm may disproportionally affect decisions toward low status groups in other fields, such as educational settings.

Our findings show that people can endorse meritocracy as an egalitarian stance concerned with reducing discrepancies between groups' outcomes; and yet, use it to legitimize racial preferences in situations of allocation of medical resources. Thus, can the salience of the

legitimizing context of meritocracy provide non-racial justifications for a more discriminating behavior toward racialized groups? Or does it constitute a context where the egalitarian image of people is not jeopardized? According to the aversive racism theory, aversive racists (a) endorse egalitarian values and beliefs, (b) believe themselves to be unprejudiced, but (c) unconsciously hold negative beliefs about Blacks and other out-groups, and (d) subtly discriminate in ways that are ambiguous and indirect and that can be rationalized as something other than racial discrimination (Dovidio & Gaertner, 2000). If the salience of the legitimizing aspect of meritocracy offers a context where the egalitarian image of people is not threatened, then it will be particularly relevant to highly aversive racists. Future work is needed to assess the role of implicit prejudice and meritocracy in medical evaluations of low status targets.

A last open question is whether Meritocracy impacts the type of rationing criteria toward low status patient prioritization. When reducing health care costs, rationalization of the use of health resources remains under the responsibility of health care providers. When rationing decisions in health care, people are likely to use the principles of distributive justice (Basson, 1979; Evans, 1983; Fortes & Zoboli, 2002; Leenen, 1992). The criteria for the distribution of health care are, among others, first-come, first-serve, need criteria or desert/merit-based criteria (Beauchamp & Childress, 2001). In the context of medical resource allocation, merit-based criteria for distributing health care supports the idea that health care is a reward for those who (a) make a positive contribution to society and/or (b) are less likely to be responsible for their own illness. Because our findings seem to suggest a certain malleability in the application of meritocracy in medical decision-making, it will be important to consider whether, when rationing decisions in health care, providers would be more likely to use merit-based criteria to select patients, varying in economic status and migratory status.

Conclusions

It is of paramount importance to understand and explain why low status groups are disproportionately likely to receive unfavorable outcomes. Across different decisional contexts, socially critical decisions have been disproportionally impacting low status group members. In the

medical context**,** a substantial chunk of research corroborates how social status disproportionally affects low status groups members across different health dimensions (Burgess et al., 2008; Sabin & Greenwald, 2012; Penner, Eggly, Griggs, Underwood, Orom, & Albrecht, 2012). Findings from this thesis support that low status patients are disproportionally affected compared to high status individuals, but evidence found in studies with laypeople, of a prioritization bias effect, was not fully consistent with the following studies with medical students, as medical students revealed a systematic compensation effect, likely due to the prevalent anti-discriminatory norms preventing low status individuals to be explicitly discriminated against (Penner et al., 2013; Pettigrew & Meertens, 1995; Vala, Brito, & Lopes, 1999/2015).

This compensation effect is aligned with the literature on implicit attitudes suggesting that explicit attitudes drive primarily pro-bias responses, whereas implicit attitudes are more influential in predicting negative preferences for low status groups (Fazio, 1990; Wilson et al., 2000; Dovidio, Kawakami, Johnson, Johnson, & Howard, 1997). Thus these findings offer guidance for the enhancement of intergroup medical decision paradigms, and provide avenues for future research.

Meritocracy is a predominant norm in many cultures, mainly in Western countries, and for decades has been discussed as a norm promoting intergroup bias, particularly against disadvantaged groups. (e.g., Furnham, 1982, 1985; Katz & Hass, 1988). Findings from this thesis corroborate this adverse aspect of Meritocracy for intergroup relations, but also reveal, consistent with more recent theorizing and research, that meritocracy itself does not have a unique implication. The impact of meritocracy is contingent with the meaning underlying it. In other words, the impact of meritocracy depends more on the highlighted meaning, and less on personal endorsement. This is probably because it is not the meritocracy itself that promotes dislike toward low status groups, but rather the explanations it contains to justify inequalities between social groups. Thus, it is likely that in a situation of social comparison, meritocracy operates through its legitimizing meaning of status-based inequalities, which, in a situation of socially critical resource allocation, may reduce preference for members of socially disadvantaged groups.

This trend toward a more nuanced view of meritocracy fits with a line of research identifying meanings and consequences of certain system-legitimizing ideologies (Levy et al., 2006; Son Hing, et al., 2011). Findings from this thesis can guide future research toward a more fine-grained analysis of the functions and consequences of meritocracy across others health care

domains while contributing to theorizing about the role of meritocracy in maintaining health inequalities.

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Appendix A

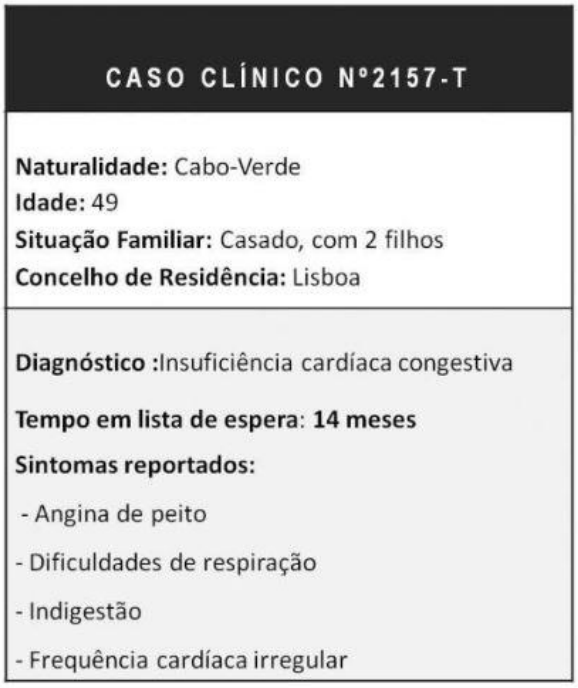
Materials used in Study 1a and Study 1b of Chapter II

1. Scenario used in Study 1a and Study 1b.

Antes de prosseguir, é importante notar que, num recente documento de análise em políticas em saúde, o Serviço Nacional de Saúde (SNS) alertou para o facto de se verificar uma diminuição de transplante de orgãos, devido a uma menor disponibilidade destes, apesar do número crescente de pacientes em lista de espera**.** De facto, o número de pacientes em lista de espera tem aumentado (in Público, 2/1/2017), sendo que muitos encontram-se já com o nível máximo de prioridade. O seu nível de conhecimento técnico em saúde não é o mais importante. Gostaríamos que se imaginasse como membro de um painel de avaliação com a missão de recomendar nível de prioridade para o transplante.

Para o efeito, iremos fornecer-lhe informações médicas sobre os casos clínicos e, em seguida, fazer-lhe algumas perguntas relativamente a cada um deles. Por favor, leia atentamente, porque será questionado sobre este material mais tarde. Abaixo encontrará uma tabela com critérios para determinar o nível de prioridade a atribuir a cada situação clínica.

CRITÉRIOS	NÍVEL DE PRIORIDADE
Em lista de espera: 4 ou mais anos ou Condição de Saúde: Risco de Vida	**Nível 7** Elevada Prioridade
	Nível 6
	Nível 5
Em lista de espera: 1-2 anos ou Condição de Saúde: Débil	**Level 4** Prioridade Moderada
	Level 3
	Level 2
Em lista de espera: 1-6 meses ou Condição de Saúde: Estável	**Level 1** Prioridade Baixa



CASO CLÍNICO Nº2157-T

Naturalidade: Cabo-Verde
Idade: 49
Situação Familiar: Casado, com 2 filhos
Concelho de Residência: Lisboa

Diagnóstico : Insuficiência cardíaca congestiva

Tempo em lista de espera: 14 meses

Sintomas reportados:

- Angina de peito
- Dificuldades de respiração
- Indigestão
- Frequência cardíaca irregular

Por favor, indique o nível de prioridade que deseja atribuir.

Prioridade Baixa			Prioridade Moderada			Prioridade Elevada
1	2	3	4	5	6	7
○	○	○	○	○	○	○

Gostaríamos que nos indicasse, sem pensar muito, uma ou duas razões para a sua decisão.

CASO CLÍNICO Nº2141-S

Naturalidade: Portugal
Idade: 49
Situação Familiar: Casado, com 2 filhos
Concelho de Residência: Lisboa

Diagnóstico : doença arterial coronária

Tempo em lista de espera: 18 meses

Sintomas reportados:

- Angina de peito
- Dificuldades de respiração
- Indigestão
- Frequência cardíaca irregular

Por favor, indique o nível de prioridade que deseja atribuir.

Prioridade Baixa			Prioridade Moderada			Prioridade Elevada
1	2	3	4	5	6	7
○	○	○	○	○	○	○

Gostaríamos que nos indicasse, sem pensar muito, uma ou duas razões para a sua decisão.

CASO CLÍNICO Nº2157-T

Naturalidade: Cabo-Verde
Idade: 49
Situação Familiar: Casado, com 2 filhos
Concelho de Residência: Lisboa

Diagnóstico : doença arterial coronária

Tempo em lista de espera: 18 meses

Sintomas reportados:

- Fadiga e tonturas

-Inchaço das pernas e tornozelos

- Acumulação de fluídos na zona abdómen

-Perda de apetite/náuseas

Por favor, indique o nível de prioridade que deseja atribuir.

Prioridade Baixa			Prioridade Moderada			Prioridade Elevada
1	2	3	4	5	6	7
○	○	○	○	○	○	○

Gostaríamos que nos indicasse, sem pensar muito, uma ou duas razões para a sua decisão na prioridade atribuída a este paciente.

CASO CLÍNICO Nº2157-T

Naturalidade: Portugal
Idade: 49
Situação Familiar: Casado, com 2 filhos
Concelho de Residência: Lisboa

Diagnóstico : Insuficiência cardíaca congestiva

Tempo em lista de espera: 14 meses

Sintomas reportados:

- Angina de peito
- Dificuldades de respiração
- Indigestão
- Frequência cardíaca irregular

Por favor, indique o nível de prioridade que deseja atribuir.

Prioridade Baixa			Prioridade Moderada			Prioridade Elevada
1	2	3	4	5	6	7
O	O	O	O	O	O	O

Gostaríamos que nos indicasse, sem pensar muito, uma ou duas razões para a sua decisão.

2. Descriptive Meritocracy Scale used in Study 1a, 1b and study 2

Por favor, para cada frase, indique a posição da escala que melhor se adequa à sua opinião.

Discordo totalmente	Discordo	Discordo em parte	Não concordo nem discordo	Concordo em parte	Concordo	Concordo totalmente
1	2	3	4	5	6	7

1.	O salário que se recebe tem pouco a ver com o sexo a que se pertence.	**1 2 3 4 5 6 7**
2.	Em Portugal, e comparativamente aos portugueses, certos grupos étnicos têm menos oportunidades para alcançar o sucesso.	**1 2 3 4 5 6 7**
3.	Apesar dos melhores esforços, existem fatores incontroláveis que muitas vezes limitam o sucesso individual.	**1 2 3 4 5 6 7**
4.	Os que trabalham arduamente, conseguem ascender com facilidade a um estatuto social mais elevado .	**1 2 3 4 5 6 7**
5.	É muito difícil para as pessoas de classe social inferior ascender a um estatuto social mais elevado.	**1 2 3 4 5 6 7**
6.	As pessoas que trabalham arduamente podem alcançar uma vida melhor.	**1 2 3 4 5 6 7**
7.	As pessoas de elevado estatuto social têm maior probabilidade de êxito que as de baixo estatuto social.	**1 2 3 4 5 6 7**
8.	O trabalho árduo nem sempre compensa.	**1 2 3 4 5 6 7**
9.	Os indivíduos são responsáveis pelo seu próprio sucesso económico.	**1 2 3 4 5 6 7**
10.	Na nossa sociedade, os ricos estão cada vez mais ricos e os pobres cada vez mais pobres.	**1 2 3 4 5 6 7**
11.	Muitos dos que contribuem de forma mais significativa são sub-recompensados pelo seu trabalho.	**1 2 3 4 5 6 7**
12.	Por causa da discriminação, a raça e a etnia são fatores importantes da posição social.	**1 2 3 4 5 6 7**
13.	Todas as pessoas têm oportunidades iguais de se tornarem economicamente bem-sucedidas.	**1 2 3 4 5 6 7**
14.	O esforço é o maior componente do sucesso.	**1 2 3 4 5 6 7**
15.	Em quase todas as profissões ou cargos, aqueles que trabalham arduamente alcançam o topo.	**1 2 3 4 5 6 7**

16.	Muitas profissões são mal pagas.	**1 2 3 4 5 6 7**
17.	Geralmente, as mulheres recebem menos que os homens em igual posição profissional.	**1 2 3 4 5 6 7**
18.	O salário que se recebe depende principalmente da capacidade e competência de cada um.	**1 2 3 4 5 6 7**
19.	O esforço passa muitas vezes despercebido e sem recompensa.	**1 2 3 4 5 6 7**
20.	O salário que se recebe depende do desempenho de cada um.	**1 2 3 4 5 6 7**
21.	Qualquer pessoa que esteja disposta a trabalhar tem muito mais oportunidades de ser bem-sucedida.	**1 2 3 4 5 6 7**
22.	Muitas pessoas ganham abaixo do real valor do seu trabalho.	**1 2 3 4 5 6 7**
23.	Todos têm oportunidades iguais de alcançar o sucesso.	**1 2 3 4 5 6 7**
24.	Todos podem encontrar trabalho, se procurarem arduamente.	**1 2 3 4 5 6 7**

3. Target check (Study 1a and 1b)

Em alguns casos clínicos foi referida informação sobre a nacionalidade de alguns pacientes. No seu caso, havia algum caso clínico com outra nacionalidade, que não a nacionalidade portuguesa?

- ○ Não
- ○ Sim

Que outra nacionalidade foi referida?

- ○ Brasileira
- ○ Angolana
- ○ Cabo-Verdiana
- ○ Ucrâniana

Appendix B

Materials used in Study 2, Study 3 and Study 4 of Chapter III

1. Meritocracy priming task used in Study 2, 3 and study 4

Na página seguinte vai **participar numa tarefa**. O **objectivo da tarefa** é construir frases simples e com sentido, a partir de um conjunto de 5 ou 6 palavras apresentadas de forma aleatória.
Regra: Em cada conjunto de palavras apresentado, fica sempre uma palavra de fora. Por exemplo, se for um conjunto de 5 palavras, constrói uma frase simples com 4 palavras. Se for um conjunto de 6 palavras, constrói uma frase simples com 5 palavras. Pode acontecer haver duas frases possíveis. Nesse caso, escreva apenas a primeira frase que lhe vier à cabeça. Tem 5 minutos para completar a tarefa.

Instruções: Cada item abaixo contém 5 palavras. A sua tarefa é criar uma frase usando 4 das 5 palavras.

Meritocracy Condition	**Neutral condition**
velocidade da tempo à luz	velocidade da tempo à luz
longe leva-te ambição flores a	horas amigos importantes são os
o tempo universidade passa rápido	o tempo universidade passa rápido
prosperidade traz esforço o luz	calculadora poupa computador tempo
a viagem experiência é rendizagem	o é curto bonito pôr-do-sol
persistência renúncia traz sucesso a	abre coisas o conhecimento portas
milagrosa a vida soa é	milagrosa a vida soa é
o viver da salário depende competência	use cinto sempre protetor segurança
o euros é bom cinema	o euros é bom cinema
o salário da desempenho depende tempo	não se arrisque beber conduza
gosta de gatos mim ela	gosta de gatos mim ela
trabalho ganhar compensa árduo sempre	limpe facas sempre as mãos
para boas oportunidades todos existem	a arma é poesia necessária
o trabalhar é importante mérito	uma passo longa começa viagem
o futebol é prático desporto	o futebol é prático desporto
o flor é sucesso conquistado	a viagem experiência aprendizagem é
o chuva é útil impermeável	o chuva é útil impermeável
são tipo pessoas bem-sucedidas competentes	A folhas tranquilidade lar do

2. Medical cases used in Study 2

2.1 Instructions used in study 2, 3 and 4

Imagine, agora, que é convidado a integrar um painel de avaliação para atribuição de nível de prioridade para transplante cardíaco, a pacientes que já se encontram em lista de espera.

Vai encontrar na página seguinte uma tabela com os critérios utilizados para determinar o nível de prioridade. Leia com atenção os critérios e o nível de prioridade a que correspondem

CRITÉRIOS	NÍVEL DE PRIORIDADE
Em lista de espera: 4 ou mais anos ou Condição de Saúde: Risco de Vida	**Nível 7** Prioridade Elevada
	Nível 6
	Nível 5
Em lista de espera: 1-2 anos ou Condição de Saúde: Débil	**Nível 4** Prioridade Moderada
	Nível 3
	Nível 2
Em lista de espera: 1-6 meses ou Condição de Saúde: Estável	**Nível 1** Prioridade Baixa

Nas páginas seguintes encontram-se **seis casos clínicos**, de seis pacientes em lista de espera para transplante cardíaco. Pedimos-lhe que leia a descrição de cada um dos casos e nos indique, na sua opinião, qual o **grau de prioridade a atribuir para transplante de coração.**

2.1 Critical cases used in study 2

<table>
<tr><th></th><th>Low Status</th><th>High Status</th></tr>
<tr><td>Low Responsability</td><td>
SISTEMA
INFORMAÇÃO
HOSPITALAR
INTEGRADO

CASO CLÍNICO Nº 2117-U

Dados do Paciente
Naturalidade: Cabo-Verde
Idade: 49
Situação Familiar: Casado com 2 filhos
Concelho de Residência: Lisboa

Dados Clínicos
Diagnóstico

☒ Cardiopatia Congénita

As cardiopatias congénitas são malformações ou defeitos na estrutura anatómica do coração e nos grandes vasos presentes no nascimento, que ocorrem durante o desenvolvimento do feto no útero. Ao longo do tempo, as malformações podem tornar a função cardíaca totalmente incapacitante ou potencialmente fatal. As causas podem ser congénitas como por exemplo o excessivo consumo de álcool por parte da mãe ao longo da gravidez. Ou podem ser genéticas como por exemplo anomalias genéticas ou cromossómicas.

Tempo em Lista de Espera: 14 meses

Sintomas Reportados: fadiga, falta de ar, dores no peito, desmaios.
</td><td>
SISTEMA
INFORMAÇÃO
HOSPITALAR
INTEGRADO

CASO CLÍNICO Nº 2067-U

Dados do Paciente
Naturalidade: Portugal
Idade: 49
Situação Familiar: Casado com 2 filhos
Concelho de Residência: Lisboa

Dados Clínicos
Diagnóstico

☒ Cardiopatia Congénita

As cardiopatias congénitas são malformações ou defeitos na estrutura anatómica do coração e nos grandes vasos presentes no nascimento, que ocorrem durante o desenvolvimento do feto no útero. Ao longo do tempo, as malformações podem tornar a função cardíaca totalmente incapacitante ou potencialmente fatal. As causas podem ser congénitas como por exemplo o excessivo consumo de álcool por parte da mãe ao longo da gravidez. Ou podem ser genéticas como por exemplo anomalias genéticas ou cromossómicas.

Tempo em Lista de Espera: 14 meses

Sintomas Reportados: fadiga, falta de ar, dores no peito, desmaios.
</td></tr>
<tr><td>High responsability</td><td>
SISTEMA
INFORMAÇÃO
HOSPITALAR
INTEGRADO

CASO CLÍNICO Nº 2117-U

Dados do Paciente
Naturalidade: Cabo-Verde
Idade: 49
Situação Familiar: Casado com 2 filhos
Concelho de Residência: Lisboa

Dados Clínicos
Diagnóstico

☒ Miocardiopatia Congestiva com Dilatação

A miocardiopatia congestiva com dilatação é caracterizada pela incapacidade dos ventrículos em bombear o sangue em quantidade suficiente para as necessidades do organismo. Esta incapacidade pode tornar a função cardíaca totalmente incapacitante ou potencialmente fatal. As causas podem ser a doença arterial coronária, a diabetes ou o consumo excessivo de álcool e drogas ilícitas.

Tempo em Lista de Espera: 18 meses

Sintomas Reportados: respiração encurtada, dores no peito, desmaios, palpitações, sopro.
</td><td>
SISTEMA
INFORMAÇÃO
HOSPITALAR
INTEGRADO

CASO CLÍNICO Nº 2067-U

Dados do Paciente
Naturalidade: Portugal
Idade: 49
Situação Familiar: Casado com 2 filhos
Concelho de Residência: Lisboa

Dados Clínicos
Diagnóstico

☒ Miocardiopatia Congestiva com Dilatação

A miocardiopatia congestiva com dilatação é caracterizada pela incapacidade dos ventrículos em bombear o sangue em quantidade suficiente para as necessidades do organismo. Esta incapacidade pode tornar a função cardíaca totalmente incapacitante ou potencialmente fatal. As causas podem ser a doença arterial coronária, a diabetes ou o consumo excessivo de álcool e drogas ilícitas.

Tempo em Lista de Espera: 18 meses

Sintomas Reportados: respiração encurtada, dores no peito, desmaios, palpitações, sopro.
</td></tr>
</table>

2.2 Filler cases used in study 2, 3 and study 4

SISTEMA INFORMAÇÃO HOSPITALAR INTEGRADO

CASO CLÍNICO Nº 2141-S

Dados do Paciente	
Naturalidade:	Portugal
Idade:	60
Situação Familiar:	Casado com 3 filhos
Concelho de Residência:	Lisboa

Dados Clínicos

Diagnóstico

☒ Doença Arterial Coronária

A doença das artérias coronárias caracteriza-se pela acumulação de depósitos de gordura nas células que revestem a parede de uma artéria coronária. Quando os depósitos de gordura aumentam podem obstruir a passagem do sangue. Se a obstrução à passagem do sangue é significativa, pode tornar a função cardíaca totalmente incapacitante ou potencialmente fatal. Uma dieta com um alto conteúdo em gordura, o hábito de fumar e uma vida sedentária aumentam o risco de doença das artérias coronárias.

Tempo em Lista de Espera: 10 meses

Sintomas Reportados: angina (dor ou desconforto no peito), indigestão e falta de ar.

SISTEMA INFORMAÇÃO HOSPITALAR INTEGRADO

CASO CLÍNICO Nº 2157-T

Dados do Paciente	
Naturalidade:	Portugal
Idade:	63
Situação Familiar:	Solteiro
Concelho de Residência:	Lisboa

Dados Clínicos

Diagnóstico

☒ Insuficiência Cardíaca Congestiva

A insuficiência cardíaca congestiva é caracterizada pela incapacidade do coração em manter um rendimento eficaz. Os ventrículos tornam-se incapazes de bombear quantidades suficientes de sangue para manter as necessidades de oxigénio no organismo. Esta incapacidade pode tornar a função cardíaca totalmente incapacitante ou potencialmente fatal. As causas podem ser a doença arterial coronária, um ataque cardíaco anterior, a pressão arterial alta, a doença de válvula cardíaca, uma doença cardíaca congénita ou miocardiopatia.

Tempo em Lista de Espera: 24 meses

Sintomas Reportados: falta de ar, inchaço dos pés e pernas, fadiga perda de apetite e dificuldade de dormir, confusão mental e memória fraca.

SISTEMA
INFORMAÇÃO
HOSPITALAR
INTEGRADO

CASO CLÍNICO Nº 5417-B

Dados do Paciente	
Naturalidade:	Portugal
Idade:	59
Situação Familiar:	Casado com 1 filho
Concelho de Residência:	Lisboa

Dados Clínicos

Diagnóstico

☒ Aterosclerose

A aterosclerose é uma doença inflamatória crónica caracterizada pelo estreitamento progressivo da parede das artérias coronárias. Quando o estreitamento é significativo pode obstruir a passagem do sangue. A obstrução à passagem do sangue pode tornar a função cardíaca totalmente incapacitante ou potencialmente fatal. As causas podem ser valores elevados de colesterol no sangue, uma pressão arterial alta, o consumo de tabaco, a obesidade e a falta de exercício.

Tempo em Lista de Espera: 30 meses

Sintomas Reportados: falta de ar, inchaço das pernas, tornozelos pés e/ou abdómen, fadiga, arritmia cardíaca, tonturas ou desmaios.

SISTEMA
INFORMAÇÃO
HOSPITALAR
INTEGRADO

CASO CLÍNICO Nº 1017-A

Dados do Paciente	
Naturalidade:	Portugal
Idade:	66
Situação Familiar:	Casado com 2 filhos
Concelho de Residência:	Lisboa

Dados Clínicos

Diagnóstico

☒ Miocardiopatia

A miocardiopatia é uma condição em que o músculo cardíaco inflama e aumenta. Ao inflamar não consegue bombear sangue tão rápido como deveria. Se o músculo cardíaco ficar muito fraco, pode tornar a função cardíaca totalmente incapacitante ou potencialmente fatal. As causas podem ser uma pressão arterial alta, a obesidade, distúrbios da tiroide, a diabetes ou o consumo excessivo de álcool e drogas ilícitas.

Tempo em Lista de Espera: 24 meses

Sintomas Reportados: falta de ar, inchaço das pernas, tornozelos pés e/ou abdómen, fadiga, arritmia cardíaca.

4. PRE-TEST MATERIALS (STUDY 2)

4.1 SIMILARITY OF HEART DISEASE

DOENÇA DAS VÁLVULAS CARDÍACAS

O que é?

A doença das válvulas cardíacas é uma doença na qual uma ou mais válvulas cardíacas não funcionam apropriadamente. Se alguma das quatro válvulas que abre e fecha cada batimento cardíaco não funcionar corretamente, pode tornar a função cardíaca totalmente incapacitante ou potencialmente fatal.

Causas:

As causas podem ser uma pressão arterial alta, ter tido febre reumática ou sífilis.

Sintomas:

- Falta de ar
- Fadiga
- Tonturas ou desmaios
- Congestão pulmonar

CARDIOPATIA CONGÉNITA

O que é?

As cardiopatias congénita são malformações ou defeitos na estrutura anatómica do coração e nos grandes vasos presentes no nascimento, que ocorrem durante o desenvolvimento do feto no útero. Ao longo do tempo, as malformações podem tornar a função cardíaca totalmente incapacitante ou potencialmente fatal.

Causas:

As causas podem ser congénitas como por exemplo o excessivo consumo de álcool por parte da mãe ao longo da gravidez. Ou podem ser genéticas como por exemplo anomalias genéticas ou cromossómicas.

Sintomas:

- Fadiga
- Falta de ar
- Dores no peito
- Desmaios

ATEROSCLEROSE

O que é?

A aterosclerose é uma doença inflamatória crónica caracterizada pelo estreitamento progressivo da parede das artérias coronárias. Quando os estreitamento é significativo pode obstruir a passagem do sangue. A obstrução à passagem do sangue pode tornar a função cardíaca totalmente incapacitante ou potencialmente fatal.

Causas:

As causas podem ser valores elevados de colesterol no sangue, uma pressão arterial alta, o consumo de tabaco, a obesidade e a falta de exercício.

Sintomas:

- Falta de ar
- Inchaço das pernas, tornozelos pés e/ou abdómen
- Fadiga
- Arritmia cardíaca
- Tonturas ou desmaios.

INSUFICIÊNCIA CARDÍACA CONGESTIVA

O que é?

A insuficiência cardíaca congestiva é caracterizada pela incapacidade do coração em manter um rendimento eficaz. Os ventrículos tornam-se incapazes de bombear quantidades suficientes de sangue para manter as necessidades de oxigénio no organismo. Esta incapacidade pode tornar a função cardíaca totalmente incapacitante ou potencialmente fatal.

Causas

As causas podem ser a doença arterial coronária, um ataque cardíaco anterior, a pressão arterial alta, a doença de válvula cardíaca, uma doença cardíaca congénita ou miocardiopatia.

Sintomas

- Falta de ar
- Inchaço dos pés e pernas
- Fadiga
- perda de apetite e dificuldade de dormir
- Confusão mental e memória fraca

Q72. Numa escala de 1 a 7 indique o grau de gravidade que atribui a esta doença?

1						7
Nada grave	2	3	4	5	6	Muito grave
○	○	○	○	○	○	◉

Q74. Em que medida considera que a doença pode ser controlada com fármacos ou cirurgia?

1						7
Nada controlada	2	3	4	5	6	Totalmente controlada
○	○	○	◉	○	○	○

Q76.
Em que medida esta doença se deve a fatores (ex:. alimentação, sedentarismo, tabagismo, álcool) que podiam ter sido prevenidos pelo indivíduo?

1						7
Nada prevenidos	2	3	4	5	6	Totalmente prevenidos
○	○	○	○	◉	○	○

Q78. Pensando agora em termos da responsabilidade individual, qual o grau de responsabilidade que uma pessoa com esta doença tem pela sua condição de saúde?

1						7
Nenhuma	2	3	4	5	6	Toda
○	○	○	○	◉	○	○

Q82.
Imagine que é o administrador do hospital que acabou de receber um coração doado. Agora, existe uma pessoa com esta doença cardíaca que está em lista de espera e é compatível com o órgão doado. **Indique o grau de prioridade para transplantação cardíaca que atribuiria a este paciente.**

1						7
Prioridade baixa	2	3	4	5	6	Prioridade elevada
○	○	○	◉	○	○	○

Q84.
Ainda pensando na questão anterior, qual o grau de confiança ou convicção que tem sua na resposta?

1						7
Nenhuma confiança	2	3	4	5	6	Toda confiança
◉	○	○	○	○	○	○

Q86.
Pessoalmente, considero que a informação disponibilizada sobre esta doença era clara e compreensível.

1						7
Discordo totalmente	2	3	4	5	6	Concordo totalmente
○	○	◉	○	○	○	○

4.2 MERITOCRACY ACTIVATION

4.2.1 Adapted from Pereira, Vala & Leyens (2009) - comprehension task

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sociedades actuais, orientadas para a competitividade num mercado de trabalho global, todos têm oportunidades iguais de alcançar o sucesso, desde que estejam dispostos a trabalhar para isso. As relações profissionais assentam em valores do mérito, como a competência e desempenho, e recompensam os indivíduos com base no seu mérito, na sua competência e na sua capacidade competitiva e desempenho. Por isso, uma sociedade que não se oriente com base nestes valores reduz substancialmente as suas oportunidades de desenvolvimento socioecónomico, pois são a competência e a capacidade competitiva e o mérito que maximizam o desenvolvimento futuro da sociedade. Além disso, um indivíduo disposto a trabalhar muito, autodisciplinado e eficiente tem mais oportunidades de ser bem-sucedido, bem remunerado e assegurar uma boa qualidade de vida.

Abaixo estão listadas cinco afirmações que refletem as ideias do texto acima. Gostaríamos que escolhesse a afirmação que, na sua opinião, está melhor associada ao conteúdo do texto. Assim, marque, por favor, um "X" na frase que melhor exprime a ideia central do texto.

[ ] – A maior parte das pessoas não tem sucesso na vida porque são preguiçosas.

[ ] – Qualquer pessoa que esteja disposta a trabalhar tem muito mais oportunidades de ser bem sucedida.

[ ] – Normalmente as pessoas que falham nos seus trabalhos fazem-no porque não se esforçam o suficiente.

[ ] – Uma pessoa que enfrenta até mesmo as tarefas mais difíceis com entusiasmo tem muitas oportunidades de subir na vida.

[ ] – As pessoas que trabalham empenhadamente naquilo que fazem têm mais oportunidades de construir uma vida melhor para elas próprias.

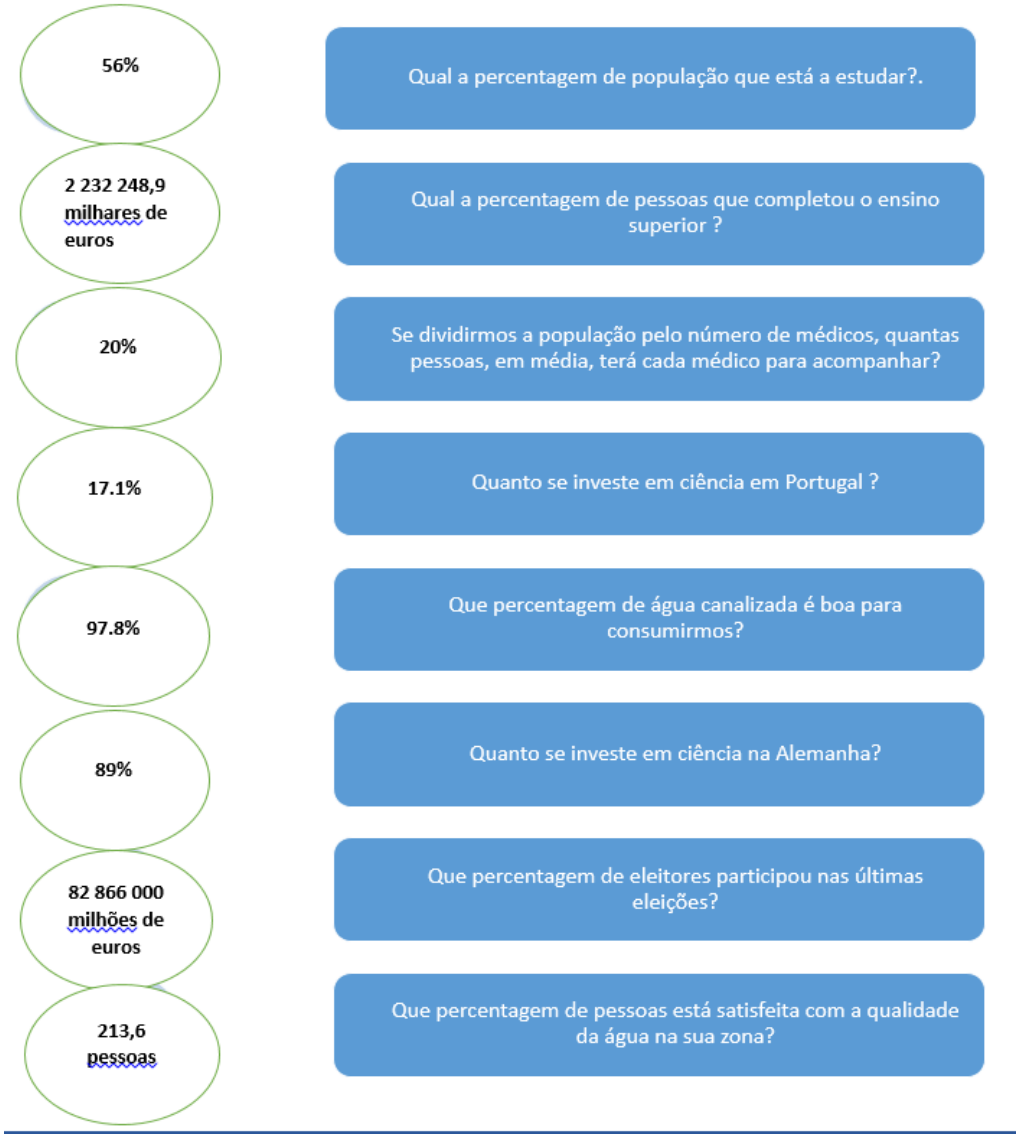
4.2.2. Pairing task

CONDIÇÃO MERITÓCRATICA

No ano passado, foi conduzido um inquérito sobre dois temas: os valores sociais e a evolução da qualidade de vida dos portugueses. Retirámos desse inquérito um conjunto de frases que reuniram maior percentagem de concordância. Apresentamos-lhe algumas dessas frases e percentagens, na página seguinte.
Objectivo da tarefa que lhe propomos é o de emparelhar cada frase com a respectiva percentagem.
Instruções: Faça corresponder cada frase (item) a cada círculo (%). Cada frase corresponde apenas a um círculo. No final do preenchimento do inquérito, apresentamos-lhe a solução correcta.

CONDIÇÃO NEUTRA

O “Sabia que….Descubra o seu país em números” foi uma iniciativa desenvolvida com o intuito de conhecer a percentagem de portugueses que estão informados sobre temas desde a educação, saúde, ciência e ambiente. Apresentaremos em seguida algumas dessas questões. Primeiro, gostaríamos de saber a sua opinião sobre os factos que lhe apresentaremos. E logo a seguir apresentamos-lhe os números reais.



4.2.3 Adapted from McCoy & Major (2007) - unscrambling task

Cada item abaixo contém 5 palavras. A sua tarefa é criar uma frase usando 4 das 5 palavras. Tem 5 minutos para esta tarefa. Escreva a primeira que lhe vem à cabeça

1. autónomas pessoas bem-sucedidas são grandes
2. sozinha a pro-actividade recompensada é
3. longe leva-te ambição flores a
4. prosperidade traz esforço o luz
5. pessoas ganham as ambiciosas correm
6. persistência renúncia traz sucesso a
7. áspero trabalho eficaz árduo é
8. o viver salário depende competência da
9. o salário desempenho depende estatuto
10. trabalho ganhar compensa árduo sempre
11. a trabalha ganha bem-sucedida pessoa
12. para boas oportunidades todos existem
13. o vence esforço sempre compensa
14. muitas Portugal sol oportunidades oferece
15. o trabalhar é importante mérito
16. o flor é sucesso conquistado
17. pessoas estatuto dedicadas bem-sucedidas são
18. são tipo pessoas bem-sucedidas competentes

The Impact of Meritocracy Norm on Medical Decisions

Cada item abaixo contém 5 palavras. A sua tarefa é criar uma frase usando 4 das 5 palavras.

Tem 5 minutos para esta tarefa.

1. gosta de gatos mim ela
2. o chuva é útil impermeável
3. o futebol é prático desporto
4. o euros é bom cinema
5. um milagre a vida soa é
6. a viagem experiência é aprendizagem
7. velocidade da tempo à luz
8. o tempo universidade passa rápido
9. horas amigos importantes são os
10. o calculadora poupa computador tempo
11. o é curto bonito por-do-sol
12. abre coisas o conhecimento portas
13. use cinto sempre protetor segurança
14. não se arrisque beba conduzir
15. limpe facas sempre as mãos
16. a arma é poesia necessária
17. uma longa viagem começa passo
18. A folhas tranquilidade lar do

5. Time Pressure manipulation used in Study 3

General Instruction

Durante este estudo avaliará os casos clínicos de seis pacientes em lista de espera para transplante de coração.

1. Time Pressure Condition

Considerando que no quotidiano muitas vezes tomamos decisões com tempo limitado, para tornar a sua tarefa próxima da realidade, disporá de **50 segundos** para cada caso clínico. Pedimos que leia a descrição de cada um dos casos clínicos e, em seguida pedimos que **responda o mais rapidamente** possível às questões apresentadas, dentro dos **50 segundos** que dispõe para cada caso.

2. No Pressure Condition

Pedimos que leia a descrição de cada um dos casos clínicos e, em seguida, responda às questões apresentadas.

4.1 Time Pressure Check (study 3)

Relativamente ao estudo onde teve de priorizar diferentes situações clínicas sentiu alguma pressão? Indique, numa escala de 1 a 7, o nível de pressão que sentiu durante este estudo.

	Nenhuma Pressão	2	3	4	5	6	Muita Pressão
	○	○	○	○	○	○	○

Ainda relativamente ao **estudo onde teve de priorizar diferentes situações clínicas**, concorda que teve **tempo suficiente para:**

	Discordo Totalmente	2	3	4	5	6	Concordo Totalmente
Avaliar cada caso de forma correcta ?	○	○	○	○	○	○	○
Tomar a melhor decisão?	○	○	○	○	○	○	○

E por último, como avalia este estudo, em termos do grau de:

	Nenhuma	2	3	4	5	6	Muita
Dificuldade?	○	○	○	○	○	○	○
Exaustão mental ?	○	○	○	○	○	○	○

4.2 Target Check (Study 2, 3 and 4)

Em alguns casos clínicos foi referida informação sobre a nacionalidade de alguns pacientes. No seu caso, havia algum caso clínico com outra nacionalidade, que não a nacionalidade portuguesa?

- ○ Não
- ○ Sim

Que outra nacionalidade foi referida?

- ○ Brasileira
- ○ Angolana
- ○ Cabo-Verdiana
- ○ Ucrâniana

5. Motivation to Control Prejudice Scale (Study 4)

Agora vamos pedir-lhe, muito sucintamente, a sua opinião sobre alguns valores sociais. Por favor, indique em que medida concorda ou discorda das seguintes frases.

Discordo totalmente	**Discordo**	**Discordo em parte**	**Não concordo nem discordo**	**Concordo em parte**	**Concordo**	**Concordo totalmente**
1	2	3	4	5	6	7

1.	Devido aos meus valores pessoais creio que é errado usar estereótipos acerca das pessoas negras.	**1 2 3 4 5 6 7**
2.	Ser não-preconceituoso(a) face às pessoas negras é importante para o meu auto-conceito.	**1 2 3 4 5 6 7**

3.	São as minhas crenças pessoais que me motivam a ser não-preconceituoso(a) face às pessoas negras.	**1 2 3 4 5 6 7**
4.	Segundo os meus valores pessoais, o uso de estereótipos contra pessoas negras é aceitável.	**1 2 3 4 5 6 7**
5.	Tento parecer não-preconceituoso(a) face às pessoas negras, de modo a evitar censura por parte de outras pessoas.	**1 2 3 4 5 6 7**
6.	Tento agir de forma não-preconceituosa face às pessoas negras devido à pressão de outras pessoas.	**1 2 3 4 5 6 7**
7.	Tendo em conta a pressão actual para se ser politicamente correcto, tento parecer não-preconceituoso(a) face às pessoas negras.	**1 2 3 4 5 6 7**
8.	Tento esconder quaisquer pensamentos negativos sobre as pessoas negras, de modo a evitar reacções negativas por parte de outras pessoas.	**1 2 3 4 5 6 7**

6. Time Pressure Check (study 4)

Durante estudo onde teve de priorizar diferentes situações clínicas sentiu ....

	Discordo totalmente	**Discordo**	**Discordo em parte**	**Não concordo nem discordo**	**Concordo em parte**	**Concordo**	**Concordo totalmente**
	1	2	3	4	5	6	7
1.	... sob pressão?						**1 2 3 4 5 6 7**
2.	...que teve tempo suficiente para responder?						**1 2 3 4 5 6 7**
3.	...que esteve focado em responder o mais rapidamente possível?						**1 2 3 4 5 6 7**
4.	...que estava stressado?						**1 2 3 4 5 6 7**

Appendix C

Materials used in Study 6 and Study 7 of Chapter VI

1. Study 6 and 7 clinical vignettes

1.1 Instructions

Vamos pedir a sua opinião relativa a três cenários clínicos hipotéticos envolvendo uma infeção crónica por vírus da hepatite C (VHC).
Após completar a tarefa, iremos colocar algumas questões de follow-up.
Antes de prosseguir, por favor, leia a informação abaixo sobre a Hepatite C.
O que é a hepatite C?
A hepatite C é uma inflamação do fígado provocada por um vírus chamado vírus da hepatite C (VHC). É um vírus que tem duas características fundamentais: é considerado oncogénico (i.e., pode dar origem à formação de cancro) pela Organização Mundial de Saúde e tem elevada probabilidade de provocar uma infeção crónica, a grande maioria, para toda a vida.
Afeta 1% da população mundial, 71 milhões e, em Portugal, cerca de 60-70% dos consumidores de drogas. Ainda, em Portugal, cerca de 30-40% dos doentes com hepatite C tem cirrose, situação de elevado risco de evoluir para cancro do fígado, 10-40% ao fim de 10 anos. Os novos fármacos, antivíricos orais, eliminam o vírus em 97% dos casos reduzindo de forma muito significativa o risco de complicações e de evolução da infeção.
Tratamento do vírus da hepatite C (VHC)
É importante refererir que, em Portugal, o acesso ao tratamento para a hepatite C é universal, contudo os encargos com o tratamento (7000 € por doente) **sugerem uma utilização eficiente e racional dos respectivos fármacos, antivíricos orais.**

Para garantir que entendeu o texto anterior, responda à seguinte pergunta:
Agora imagine-se como MÉDICO/A, membro de um painel de avaliação com a missão de recomendar pacientes para tratamento da hepatite C.
Nas páginas seguintes irá ver três casos clínicos.

Para o efeito, iremos fornecer-lhe informação clínica e, em seguida, fazer-lhe algumas perguntas relativamente a cada um deles. Por favor, leia as informações médicas atentamente, porque será questionado sobre este material mais tarde.

Por questões de confidencialidade, qualquer informação reveladora da identidade do indivíduo aparecerá desfocada.
Considerando que no quotidiano muitas vezes tomamos decisões com tempo limitado, para tornar a sua tarefa próxima da realidade, disporá de **um minuto e meio** para cada caso clínico. Pedimos que leia a descrição de cada um dos casos clínicos e, em seguida, **responda o mais rapidamente** possível às questões apresentadas, dentro do **minuto e meio** que dispõe para cada caso.

1.2 Materials

1.2.1 The racial stereotype consistent vs inconsistent manipulation

Low Status

Sexo: Masculino
Naturalidade: Cabo-Verde
Local de Residência: Lisboa

Idade:49
Peso: 78,5 Kg
Altura: 1,73 m
Pressão Arterial: 139/88 mm Hg
IMC: 26,05
Batimento Cardíaco: 85 bpm

Historial clínico

O paciente veio à consulta referenciado pelo médico de família. Há muitos anos que não faz análises clínicas de rotina. Após consulta com médico de família, realizou as análises de rotina e fez o teste rápido para rastreio de VIH e VHC. O teste de rastreio para o VIH foi negativo, contudo o teste para VHC foi positivo. Os resultados laboratoriais seguintes confirmam que o doente tem carga vírica positiva (6.153.000 IU/mL), Genótipo 1. A doença hepática foi avaliada através de FibroScan, um método não invasivo de avaliação da intensidade da inflamação hepática, e numa escala de F0 a F4, encontra-se no grau F3 (fibrose avançada). O doente não está a fazer medicação concomitante, e está assintomático, o que é o mais frequente na hepatite C, mesmo quando já existe cirrose. Não tem consumo ativo de álcool e drogas. O contágio terá ocorrido provavelmente através de relações heterossexuais com várias parceiras sem utilização de preservativo, por volta dos 20 anos de idade [*O contágio terá ocorrido provavelmente através de partilha de tubos para cheirar cocaína ou* speedball*]*. Durante a consulta você (o médico) apercebe-se que este doente tem conhecimentos reduzidos sobre a prevenção e tratamento da hepatite C.

Filler Case

Sexo: Masculino
Naturalidade: Portugal
Local de Residência: Lisboa

Idade: 55 anos
Peso: 69.5 Kg
Altura: 1.63 m
Pressão Arterial: 129/90 mm Hg
IMC: 26.16
Batimento Cardíaco: 71 bpm

Historial clínico

O paciente veio à consulta referenciado pelo médico de família. Há muitos anos que não faz análises clínicas de rotina. Após consulta com médico de família, realizou análises de rotina e rastreio rápido para VIH e VHC. O teste de rastreio para VIH foi negativo, contudo o teste para VHC foi positivo. Os resultados laboratoriais confirmam que o doente tem carga vírica positiva (5.490.100 IU/mL), Genótipo 1. A doença hepática foi avaliada através de um método não invasivo de avaliação - elastografia hepática transitória (Fibroscan). Na escala de intensidade que mede a inflamação hepática (F0 a F4) encontra-se no grau F4 (fibrose severa ou cirrose). O doente refere sentir-se cansado, com frequência tem dores nas pernas, e, por vezes, sente náuseas. Não tem consumo ativo de álcool e drogas. O contágio terá ocorrido provavelmente através de partilha de material injetável, por volta dos 25 anos de idade. Durante a consulta, você (o médico) apercebe-se que o doente tem conhecimentos reduzidos sobre a hepatite C.

High Status

Sexo: Masculino
Naturalidade: Portugal
Local de Residência: Lisboa

Idade: 51 anos
Peso: 76.5 Kg
Altura: 1.69 m
Pressão Arterial: 135/80 mm Hg
IMC: 26.78
Batimento Cardíaco: 72 bpm

Historial clínico

O paciente veio à consulta referenciado pelo médico de família. Há muitos anos que não faz análises clínicas de rotina. Após consulta com médico de família, realizou análises de rotina e rastreio rápido para VIH e VHC. O teste de rastreio para VIH foi negativo, contudo o teste para VHC foi positivo. Os resultados laboratoriais seguintes confirmam que o doente tem carga vírica positiva (5.370.000 IU/mL), Genótipo 1. A doença hepática foi avaliada através de uma elastografia hepática transitória, um método não invasivo de avaliação da doença e numa escala de F0 a F4, encontra-se no grau 3 (fibrose avançada). O doente não apresenta sintomas, o que é o mais frequente na hepatite C, mesmo quando já existe cirrose. Não tem consumo ativo de álcool e drogas. O contágio terá ocorrido provavelmente através de relações heterossexuais com várias parceiras sem utilização de preservativo, por volta dos 20 anos de idade [*O contágio terá ocorrido provavelmente através de partilha de tubos para cheirar cocaína ou* speedball*]*. Durante a consulta, você (o médico) apercebe-se que o doente tem conhecimentos reduzidos sobre a hepatite C

Em que medida recomendaria este paciente para tratamento da hepatite C?

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)
1 (1)	○	○	○	○	○	○	○

After the participant first indicated the extent to which he would recommend the three patients for the treatment of hepatitis C, in a second moment each participant received the following real feedback

Relativamente ao [primeiro/segundo/terceiro] caso, na questão "em que medida recomendaria o paciente para tratamento de hepatite C" o nível de recomendação indicado por si foi *{SelectedAnswers}*

Quão confiante está que esta pessoa beneficiaria com o tratamento?

	Nada Confiante	2	3	4	5	6	Muito Confiante
	○	○	○	○	○	○	○

Qual a probabilidade de este paciente...

	Nada Provavel	2	3	4	5	6	Muito Provavel
...seguir "à risca" as recomendações do médico?	○	○	○	○	○	○	○
...ser altamente responsável na tomada de medicamentos?	○	○	○	○	○	○	○

2. Study 6 and 7 Scales

1. **Political Orientation Scale**
2. **Descriptive Meritocracy Scale**
3. **SDO-E Scale (Ho et al., 2012)**

Antes de proceder para a secção seguinte, indique a sua orientação política, seleccionando um número de 1 a 7.

	1 (Extrema-Esquerda)	2 (Esquerda)	3 (Centro-Esquerda)	4 (Centro)	5 (Centro-Direita)	6 (Direita)	7 (Extrema-Direita)
	○	○	○	○	○	○	○

Discordo totalmente	Discordo	Discordo em parte	Não concordo nem discordo	Concordo em parte	Concordo	Concordo totalmente
1	2	3	4	5	6	7

1.	Se as pessoas trabalharem arduamente conseguem quase sempre o que querem.	**1 2 3 4 5 6 7**

2.	O esforço é o maior componente do sucesso.	**1 2 3 4 5 6 7**
3.	O sucesso é possível para qualquer pessoa que esteja disposta a trabalhar arduamente	**1 2 3 4 5 6 7**
4.	Todos conseguem encontrar trabalho, se procurarem arduamente	**1 2 3 4 5 6 7**
5.	Se, numa organização, todas as pessoas tiverem as mesmas competências, a promoção é sempre atribuída à pessoa que se empenha mais.	**1 2 3 4 5 6 7**
6.	Qualquer pessoa que esteja disposta e capaz para trabalhar arduamente tem uma boa probabilidade de ser bem-sucedida.	**1 2 3 4 5 6 7**
7.	Se as pessoas trabalharem arduamente terão maior probabilidade de criar uma vida boa para si próprias.	**1 2 3 4 5 6 7**
8.	A maioria das pessoas que não sobe na vida, não deveria culpar o sistema; devem culpar-se a si próprias, por não progredir na vida.	**1 2 3 4 5 6 7**
9.	Os indivíduos são responsáveis pelo seu próprio sucesso financeiro.	**1 2 3 4 5 6 7**
10.	A maioria das pessoas que não é bem-sucedida na vida é simplesmente preguiçosa.	**1 2 3 4 5 6 7**
11.	Normalmente, as pessoas que falham no seu trabalho é porque não tentam o suficiente.	**1 2 3 4 5 6 7**
12.	Normalmente, a aversão ao trabalho é sinal de fraqueza no carácter.	**1 2 3 4 5 6 7**
13.	Portugal é uma sociedade aberta onde todos os indivíduos podem alcançar um estatuto mais elevado.	**1 2 3 4 5 6 7**
14.	Na vida, as pessoas que desempenham bem o seu trabalho ascendem ao topo.	**1 2 3 4 5 6 7**

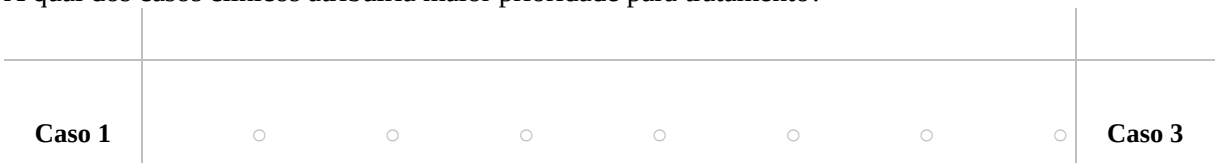
Discordo totalmente	**Discordo**	**Discordo em parte**	**Não concordo nem discordo**	**Concordo em parte**	**Concordo**	**Concordo totalmente**
1	2	3	4	5	6	7

1.	1. Não nos deveríamos esforçar para atingir igualdade entre grupos.	**1 2 3 4 5 6 7**
2.	2. Não deveríamos tentar garantir que todos os grupos têm a mesma qualidade de vida.	**1 2 3 4 5 6 7**
3.	3. É injusto tentar tornar os grupos iguais.	**1 2 3 4 5 6 7**
4.	4. Igualdade entre grupos não deveria ser o nosso objectivo principal.	**1 2 3 4 5 6 7**
5.	5. Deveríamos trabalhar para que todos os grupos tenham uma oportunidade igual de [illegible]	**1 2 3 4 5 6 7**
6.	6. Deveríamos fazer o possível para igualar as condições dos diferentes grupos.	**1 2 3 4 5 6 7**
7.	7. Independentemente do esforço necessário, deveríamos lutar para garantir que todos os grupos têm as mesmas oportunidades na vida.	**1 2 3 4 5 6 7**

8.	8. Igualdade entre grupos deveria ser o nosso ideal.	**1 2 3 4 5 6 7**
9.	9. Alguns grupos de pessoas devem ser mantidos no seu lugar.	**1 2 3 4 5 6 7**
10.	10. Provavelmente é bom que certos grupos estejam numa posição superior e que outros estejam numa posição inferior.	**1 2 3 4 5 6 7**
11.	11. Uma sociedade ideal requer que certos grupos estejam numa posição superior e que outros estejam numa posição inferior.	**1 2 3 4 5 6 7**
12.	12. Alguns grupos de pessoas são simplesmente inferiores a outros grupos.	**1 2 3 4 5 6 7**

2.1 Zero-Sum Item

Pense nos casos clínicos que avaliou.
A qual dos casos clínicos atribuiria maior prioridade para tratamento?



2.2. Stereotypes Open Question

Estamos todos conscientes da existência de estereótipos culturais sobre determinados grupos sociais. Em contexto de saúde, estas podem ser ideias que se viram representadas em filmes, se ouviram durante o curso, em conversa com colegas, ou através de outros profissionais de saúde. Salientamos que essas características podem ou não refletir as suas crenças pessoais sobre esses grupos.

No espaço abaixo, indique o máximo, que se conseguir lembrar, **de** estereótipos culturais sobre **comportamentos em saúde de** Africanos. Pense em pessoas negras como um grupo em vez de um indivíduo específico que você possa conhecer.

Por favor, note que não estamos interessados em saber as suas crenças pessoais, mas sim

aquelas que são partilhadas pelos profissionais de saúde em geral, relativamente aos Africanos.

2.2 Degree of knowledge about Hepatitis C

Qual o seu grau de familiaridade com ...

	1	2	3	4	5	6	7
... hepatite C ?	○	○	○	○	○	○	○
...os tratamentos disponíveis para a Hepatite C ?	○	○	○	○	○	○	○

3. Materials from Study 7

3.1 Induction Instructions

Agora vai participar na segunda parte do inquérito, numa tarefa que involve a leitura de uma notícia saída recentemente no jornal Público e, seguidamente, iremos pedir-lhe a sua opinião sobre a mesma.

O desempenho cognitivo ou cognição refere-se a um conjunto de habilidades mentais necessárias para a obtenção de conhecimento sobre o mundo. Estas habilidades envolvem, entre outros, o pensamento, o raciocínio e a linguagem. Vários estudos têm mostrado que atividades que estimulam o raciocínio lógico têm impacto a nível neurológico, e que estes efeitos melhoram a quantidade e a qualidade das conexões entre as células nervosas (ao nível dos axónios), resultando num melhor desempenho cognitivo. Dado que os modelos de raciocínio (como por exemplo, o raciocínio lógico) têm impacto na tomada de decisão, nesta parte estamos interessados em investigar diferentes modalidades de raciocínio lógico, através do desempenho em tarefas de fluência verbal.

Assim, na próxima página irá ler um texto sobre um conjunto de experiências feitas em Psicologia sobre determinantes do sucesso. Por favor, leia o texto com atenção, pois, em seguida, irá ser pedida a sua opinião**.**

ANTI-MERITOCRACY CONDITION

P2 ÍPSILON CULTO FUGAS P3 CINECARTAZ Entrar Assine já

CIÊNCIA › ESPAÇO MEDICINA ECOSFERA

PSICOLOGIA

Progredir na vida: existem determinantes do sucesso?

Andreia Soares · 11 de Fevereiro de 2019, 7:13

417 PARTILHAS

Várias experiências publicadas no Journal of Personality and Social Psychology têm mostrado que os indivíduos que mais acreditam que progredir na vida é sinónimo de ser trabalhador e ter ambição não tendem necessariamente a possuir uma atividade profissional melhor remunerada.

Michael Kraus, da Universidade de Yale, e Dacher Keltner, da Universidade da Califórnia, em Berkeley, têm explorado de que forma o esforço individual e ambição são fatores de sucesso na vida (medido através do estatuto social e económico). Num dos estudos, os participantes tinham de fazer uma avaliação sobre os aspetos que consideram mais importantes para progredir na vida. Foi pedido a um grupo de adultos americanos que indicasse numa escala de 1 (nada importante) a 5 (essencial) a importância que atribui a aspetos como "ter ambição" e "ser trabalhador" e também, "pertencer a uma família favorecida" e "conhecer pessoas bem colocadas na vida". Os investigadores mostraram que o estatuto económico mais elevado (medido através da categoria profissional e nível salarial) não era significativamente relacionado com o talento, ambição e esforço das pessoas.

Recentemente, em Portugal, uma equipa de investigadores e psicólogos portugueses da Universidade de Lisboa replicou este estudo numa amostra de cerca de 1100 respondentes portugueses. O padrão de resultados desta investigação está em linha com aqueles encontrados nos Estados Unidos, ou seja, as pessoas com um estatuto económico mais elevado não progrediram na vida exclusivamente por via do seu talento, ambição e esforço.

Com base nos resultados alcançados, a equipa de investigadores concluiu que quem é ambicioso, trabalhador e esforçado não tem necessariamente maior sucesso pessoal, profissional e económico.

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Os penteados que se desalinham dos bordados de uma modelo

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Com base no texto que acabou de ler, por favor, reflita e escreva a sua opinião sobre porque é que quem é trabalhador e esforçado não tem necessariamente maior sucesso pessoal, profissional e económico.

PRO-MERITOCRACY CONDITION

P2 ÍPSILON CULTO FUGAS P3 CINECARTAZ Entrar Assine já

CIÊNCIA › ESPAÇO MEDICINA ECOSFERA

PSICOLOGIA

Progredir na vida: os determinantes do sucesso.

Andreia Soares · 11 de Fevereiro de 2019, 7:13

417 PARTILHAS

Várias experiências publicadas no Journal of Personality and Social Psychology têm mostrado que os indivíduos que mais acreditam que progredir na vida é sinónimo de ser trabalhador e ter ambição tendem a possuir uma atividade profissional melhor remunerada.

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Recentemente, em Portugal, uma equipa de investigadores e psicólogos portugueses da Universidade de Lisboa replicou este estudo numa amostra de cerca de 1100 respondentes portugueses. O padrão de resultados desta investigação está em linha com aqueles encontrados nos Estados Unidos, ou seja, as pessoas que concordam fortemente que a posição social que alcançam na vida é fruto do seu talento, ambição e esforço, trabalham mais horas por semana e têm uma atividade profissional mais bem remunerada.

Com base nos resultados alcançados, a equipa de investigadores concluiu que quem é ambicioso, trabalhador e esforçado tem maior sucesso pessoal, profissional e económico.

MAIS POPULARES

ADSE
CUF formaliza suspensão da convenção com ADSE. E dá três razões

INSTAGRAM
Os penteados que se desalinham dos bordados de uma modelo

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Com base no texto que acabou de ler, por favor, reflita e escreva a sua opinião sobre porque é que quem é ambicioso, trabalhador e esforçado tem maior sucesso pessoal, profissional e económico.

Appendix D

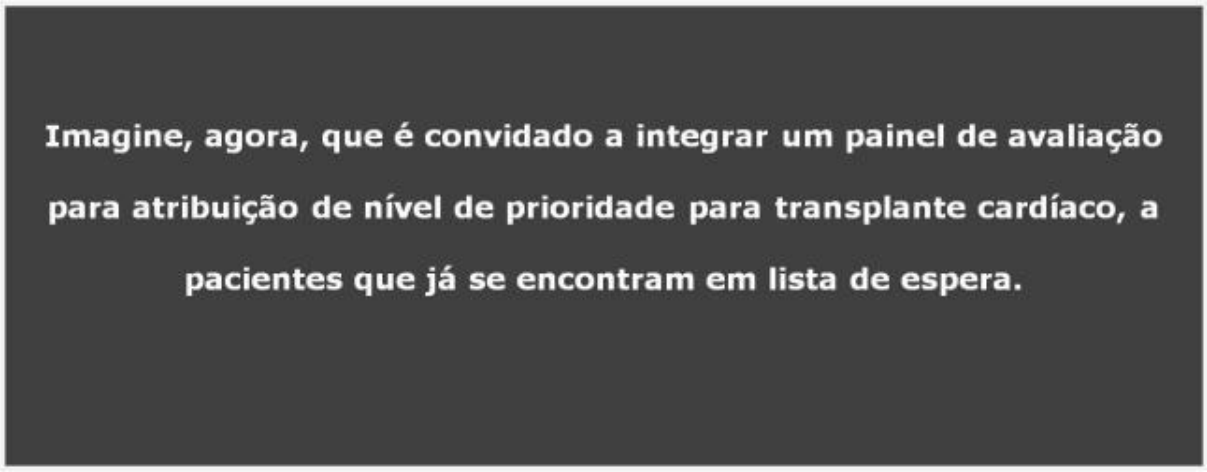
Materials used in Study 8 of Chapter VI

1. STUDY INSTRUCTIONS

Este estudo investiga a forma como as pessoas, de uma maneira geral, tomam decisões, e tem como objetivo estudar a atribuição de níveis de prioridade a diferentes situações médicas.

O Instituto Português do Sangue e da Transplantação (IPST) alertou recentemente para o facto de se verificar uma **diminuição de transplantes cardíacos, apesar do número crescente de pacientes recomendados para transplante**.

De facto, o número de pacientes em lista de espera para um transplante cardíaco ronda os 4500, sendo que muitos encontram-se já com o nível máximo de prioridade.



Durante este estudo avaliará os casos clínicos de seis pacientes em lista de espera para transplante de coração.
Considerando que no quotidiano muitas vezes tomamos decisões com tempo limitado, para tornar a sua tarefa próxima da realidade, disporá de **50 segundos** para cada caso clínico. Pedimos que leia a descrição de cada um dos casos clínicos e, em seguida pedimos que **responda o mais rapidamente** possível às questões apresentadas, dentro dos **50 segundos** que dispõe para cada caso.

2. CLINICAL VIGNETTES (MATERIALS)

1. **IMMIGRANT AND BLACK TARGET**
2. **IMMIGRANT AND WHITE TARGET**
3. **PORTUGUESE AND BLACK TARGET**
4. **PORTUGUSE AND WHITE TARGET**
5. **FILLER CASE**
6. **FILLER CASE**
7. **FILLER CASE**

IMMIGRANT AND BLACK TARGET

SISTEMA
INFORMAÇÃO
HOSPITALAR
INTEGRADO

CASO CLÍNICO Nº 2117-U

Dados do Paciente

Nome: [redacted]

Nascido em: ☐ Portugal ☒ Fora de Portugal

Idade: 49

Situação Familiar: Casado com 2 filhos

Concelho de Residência: Lisboa

Dados Clínicos

Diagnóstico

☒ Miocardiopatia Congestiva com Dilatação

A miocardiopatia congestiva com dilatação é caracterizada pela incapacidade dos ventrículos em bombear o sangue em quantidade suficiente para as necessidades do organismo. Esta incapacidade pode tornar a função cardíaca totalmente incapacitante ou potencialmente fatal. As causas podem ser a doença arterial coronária, a diabetes ou o consumo excessivo de álcool e drogas ilícitas.

Tempo em Lista de Espera: 18 meses

Sintomas Reportados: respiração encurtada, dores no peito, desmaios, palpitações, sopro.

IMMIGRANT AND WHITE TARGET

SISTEMA
INFORMAÇÃO
HOSPITALAR
INTEGRADO

CASO CLÍNICO Nº 2067-U

Dados do Paciente

Nome: [redacted]

Nascido em: ☐ Portugal ☒ Fora de Portugal

Idade: 49

Situação Familiar: Casado com 2 filhos

Concelho de Residência: Lisboa

Dados Clínicos

Diagnóstico

☒ Miocardiopatia Congestiva com Dilatação

A miocardiopatia congestiva com dilatação é caracterizada pela incapacidade dos ventrículos em bombear o sangue em quantidade suficiente para as necessidades do organismo. Esta incapacidade pode tornar a função cardíaca totalmente incapacitante ou potencialmente fatal. As causas podem ser a doença arterial coronária, a diabetes ou o consumo excessivo de álcool e drogas ilícitas.

Tempo em Lista de Espera: 18 meses

Sintomas Reportados: respiração encurtada, dores no peito, desmaios, palpitações, sopro.

PORTUGUESE AND BLACK TARGET

SISTEMA INFORMAÇÃO HOSPITALAR INTEGRADO

CASO CLÍNICO Nº 2117-U

Dados do Paciente

Nome: [redacted]

Nascido em: ☒ Portugal ☐ Fora de Portugal

Idade: 49

Situação Familiar: Casado com 2 filhos

Concelho de Residência: Lisboa

Dados Clínicos

Diagnóstico

☒ Miocardiopatia Congestiva com Dilatação

A miocardiopatia congestiva com dilatação é caracterizada pela incapacidade dos ventrículos em bombear o sangue em quantidade suficiente para as necessidades do organismo. Esta incapacidade pode tornar a função cardíaca totalmente incapacitante ou potencialmente fatal. As causas podem ser a doença arterial coronária, a diabetes ou o consumo excessivo de álcool e drogas ilícitas.

Tempo em Lista de Espera: 18 meses

Sintomas Reportados: respiração encurtada, dores no peito, desmaios, palpitações, sopro.

PORTUGUSE AND WHITE TARGET

SISTEMA
INFORMAÇÃO
HOSPITALAR
INTEGRADO

CASO CLÍNICO Nº 2067-U

Dados do Paciente

Nome: [redacted]

Nascido em: ☒ Portugal ☐ Fora de Portugal

Idade: 49

Situação Familiar: Casado com 2 filhos

Concelho de Residência: Lisboa

Dados Clínicos

Diagnóstico

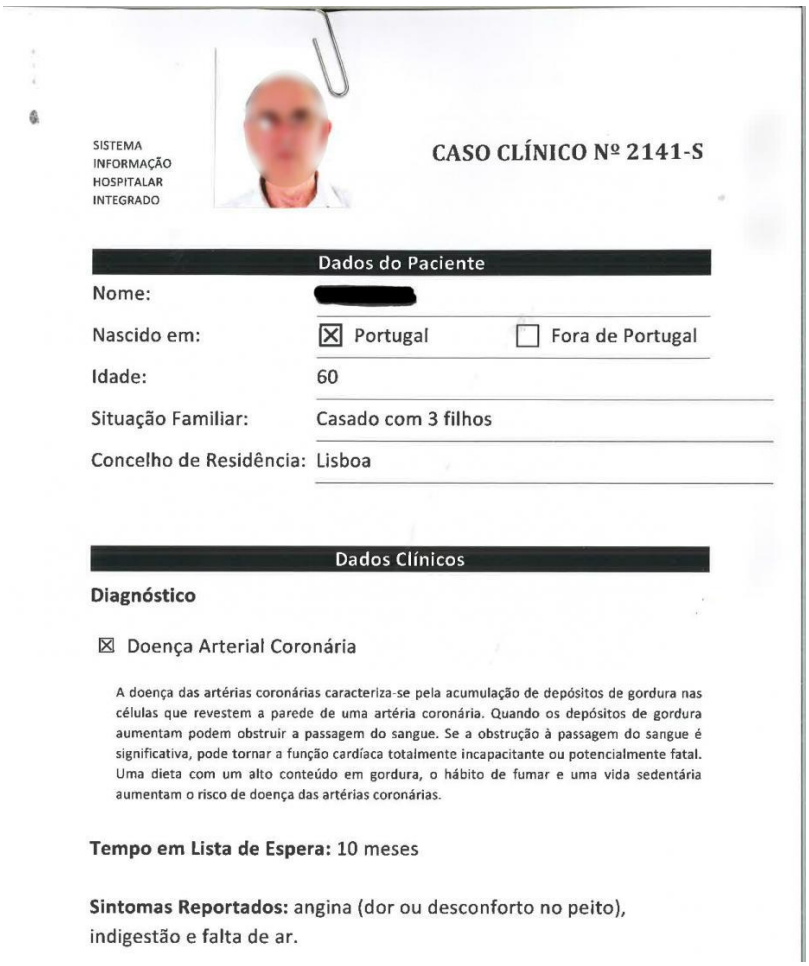
☒ Miocardiopatia Congestiva com Dilatação

A miocardiopatia congestiva com dilatação é caracterizada pela incapacidade dos ventrículos em bombear o sangue em quantidade suficiente para as necessidades do organismo. Esta incapacidade pode tornar a função cardíaca totalmente incapacitante ou potencialmente fatal. As causas podem ser a doença arterial coronária, a diabetes ou o consumo excessivo de álcool e drogas ilícitas.

Tempo em Lista de Espera: 18 meses

Sintomas Reportados: respiração encurtada, dores no peito, desmaios, palpitações, sopro.

FILLER CASE



SISTEMA
INFORMAÇÃO
HOSPITALAR
INTEGRADO

CASO CLÍNICO Nº 2141-S

Dados do Paciente

Nome:	[redacted]
Nascido em:	☒ Portugal ☐ Fora de Portugal
Idade:	60
Situação Familiar:	Casado com 3 filhos
Concelho de Residência:	Lisboa

Dados Clínicos

Diagnóstico

☒ Doença Arterial Coronária

A doença das artérias coronárias caracteriza-se pela acumulação de depósitos de gordura nas células que revestem a parede de uma artéria coronária. Quando os depósitos de gordura aumentam podem obstruir a passagem do sangue. Se a obstrução à passagem do sangue é significativa, pode tornar a função cardíaca totalmente incapacitante ou potencialmente fatal. Uma dieta com um alto conteúdo em gordura, o hábito de fumar e uma vida sedentária aumentam o risco de doença das artérias coronárias.

Tempo em Lista de Espera: 10 meses

Sintomas Reportados: angina (dor ou desconforto no peito), indigestão e falta de ar.

FILLER CASE

SISTEMA INFORMAÇÃO HOSPITALAR INTEGRADO

CASO CLÍNICO Nº 2157-T

Dados do Paciente

Nome:	[redacted]
Nascido em:	☒ Portugal ☐ Fora de Portugal
Idade:	63
Situação Familiar:	Solteiro
Concelho de Residência:	Lisboa

Dados Clínicos

Diagnóstico

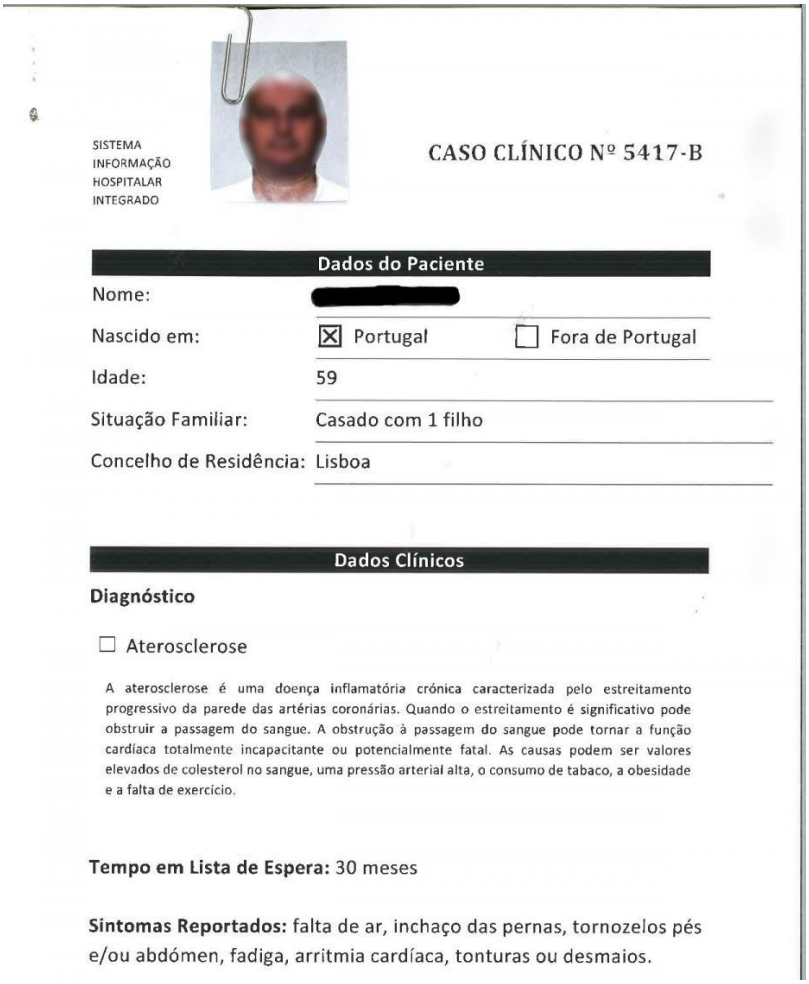
☒ Insuficiência Cardíaca Congestiva

A insuficiência cardíaca congestiva é caracterizada pela incapacidade do coração em manter um rendimento eficaz. Os ventrículos tornam-se incapazes de bombear quantidades suficientes de sangue para manter as necessidades de oxigénio no organismo. Esta incapacidade pode tornar a função cardíaca totalmente incapacitante ou potencialmente fatal. As causas podem ser a doença arterial coronária, um ataque cardíaco anterior, a pressão arterial alta, a doença de válvula cardíaca, uma doença cardíaca congénita ou miocardiopatia.

Tempo em Lista de Espera: 24 meses

Sintomas Reportados: falta de ar, inchaço dos pés e pernas, fadiga perda de apetite e dificuldade de dormir, confusão mental e memória fraca.

FILLER CASE



SISTEMA
INFORMAÇÃO
HOSPITALAR
INTEGRADO

CASO CLÍNICO Nº 5417-B

Dados do Paciente

Nome:	[redacted]
Nascido em:	☒ Portugal ☐ Fora de Portugal
Idade:	59
Situação Familiar:	Casado com 1 filho
Concelho de Residência:	Lisboa

Dados Clínicos

Diagnóstico

☐ Aterosclerose

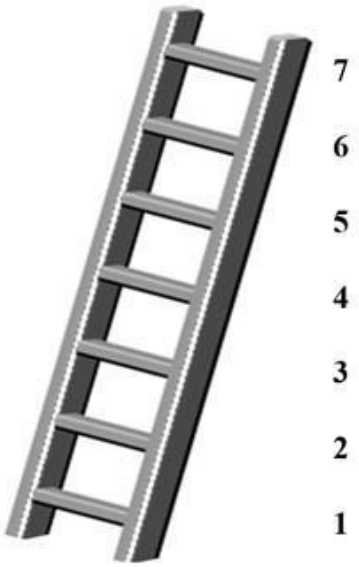
A aterosclerose é uma doença inflamatória crónica caracterizada pelo estreitamento progressivo da parede das artérias coronárias. Quando o estreitamento é significativo pode obstruir a passagem do sangue. A obstrução à passagem do sangue pode tornar a função cardíaca totalmente incapacitante ou potencialmente fatal. As causas podem ser valores elevados de colesterol no sangue, uma pressão arterial alta, o consumo de tabaco, a obesidade e a falta de exercício.

Tempo em Lista de Espera: 30 meses

Sintomas Reportados: falta de ar, inchaço das pernas, tornozelos pés e/ou abdómen, fadiga, arritmia cardíaca, tonturas ou desmaios.

3. PERCEPTION OF PATIENT SOCIAL STATUS

Para esta parte do questionário, pense numa escada como uma representação da situação em que as pessoas se encontram. No TOPO da escada encontram-se as pessoas que estão na melhor situação – aqueles que têm mais dinheiro, mais educação e os trabalhos mais respeitados. Na PARTE DE BAIXO encontram-se as pessoas que estão na pior situação – quem tem menos dinheiro, menos educação e os trabalhos menos respeitados. Quanto mais alto estiver nesta escada, mais próximo está das pessoas que estão mesmo no topo; quanto mais baixo estiver, mais próximo está das pessoas que estão mesmo na parte de baixo.



Onde colocaria este PACIENTE nesta escada?

Por favor, selecione o número correspondente ao degrau onde pensa que este paciente se encontra.

	1	2	3	4	5	6	7
	○	○	○	○	○	○	○

4. MANIPULATION CHECKS

TARGET CHECK

Nos casos clínicos que lhe foram apresentados, havia algum paciente nascido fora de Portugal?

- ○ Não
- ○ Sim

Nos casos clínicos que lhe foram apresentados, havia algum paciente com cor de pele negra?

- ○ Não
- ○ Sim

TIME PRESSURE CHECK

Relativamente à parte do estudo onde teve de priorizar diferentes situações clínicas, no seu caso, existia um relógio em contagem decrescente?

- Não
- Sim